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ABSTRACT

Based on the premise that Canada needs to collect, collate, analyze, and disseminate reliable data on early childhood education and care (ECEC) programs that are comparable across provinces/territories and that good data are fundamental for informing policy, research, and service delivery, the National Data Project was funded in 2000-2001 to produce a strategy for the development of reliable, comparable ECEC data in Canada. Following an executive summary, the report is presented in five sections. Section 1 describes current ECEC practices, and federal/provincial initiatives and offers a thumbnail sketch of the state of Canada's ECEC data. Section 2 analyzes the purposes and requirements for which ECEC data should be collected, organized, analyzed, and used. This part also discusses the value of indicators and the use of data to support a program of research. Section 3 outlines and describes current and past data collection in Canada and presents some international data approaches to ECEC data that may be useful in Canada. Section 4 outlines what types of provincial/territorial administrative, program, and monitoring data on ECEC services are currently collected, and examines the strengths and weakness of these data for answering various questions and for producing indicators of progress. Section 5 focuses on conclusions and presents six recommendations: (1) develop new data collection vehicles; (2) improve utilization and design of existing data collection vehicles; (3) improve provincial/territorial administrative data; (4) develop a Canadian policy and program database; (5) establish a program of ECEC research; and (6) coordinate data collection and organization. The report's nine appendices include the survey instruments; tabulated data on child care technology, enrollment, service duration, family child care, and

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funding; and information on locating data sources. (Contains 51 references.) (KB)

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The State of Data on Early Childhood Education and Care in Canada

The State of Data on Early Childhood Education and Care in Canada

National Data Project Final Report

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INTRODUCTION AND ACKNOWLEDGEMENTS

This project was motivated by discussion among the Technical Advisory Committee of Human Resource Development Canada's Child Care Visions research and development program about the state of Canadian early childhood education and care (ECEC) data. During the rather long duration of the project, there have been some key policy developments in ECEC, making the case for reliable and more complete ECEC data even stronger than it was several years ago. The March 2003 Multilateral Agreement on Early Learning and Care is the first Canadian intergovernmental agreement that focuses solely on ECEC. As it has specific public reporting requirements, the authors hope that this report will be useful for facilitating the process.

We would like to express our appreciation to the provincial/territorial officials in child care and other areas who most generously provided information for this project. In addition, we would like to thank our colleagues who were kind enough to review drafts of the report and to provide constructive criticism as well as CRRU staff who assisted with research and production of the report. Finally, a very sincere thanks is due to the officials at HRDC's then-Child Care Visions program, now Social Development Partnerships, who patiently supported this project. Please note that the point of view expressed in this report does not necessarily reflect that of the funder.

EXECUTIVE SUMMARY

The National Data Project was funded in 2000/2001 by Child Care Visions, Human Resources Development Canada to produce a 'roadmap' or strategy for the development of reliable, comparable early childhood education and care (ECEC) data to inform policy, research, and service delivery.

PUBLIC ACCOUNTABILITY AND PROGRAM DESIGN

The work of the project was based on the premise that Canada needs to collect, collate, analyze and disseminate reliable data on programs relating to the care and education of young children that are comparable across provinces/territories. There are two main rationales for this perspective. First, it is essential for public accountability for programs and, second, good data are fundamental to designing social indicators and intelligent public policy. In the last few years, this view has been endorsed in federal-provincial-territorial agreements, most recently in the Multilateral Framework Agreement on Early Learning and Care (2003) which identifies public reporting as integral.

MULTIFUNCTIONAL APPROACH TO EARLY CHILDHOOD EDUCATION AND CARE (ECEC)

Stimulated by work undertaken in the European Union Childcare Network and the Organization for Economic Co-operation and Development, this report takes a multifunctional approach to ECEC data. It is increasingly recognized that programs for young children should take the entire experience of the child into account and not be limited to whether the parents work outside the home or whether the child is ready for academic education. The terms "early childhood education and care" and "early learning and care" underline a shift in emphasis away from segregated services—oriented or restricted to children with working parents, or to advantaged children whose parents want to provide optimal developmental opportunities, or poor children, children with disabilities, children whose mother is in a training program, children at risk—to the idea that a well-designed, inclusive system of services can provide care and early education for *all* children and support for their parents whether they are in or out of the paid workforce.

This project therefore considers ECEC data to cover a range of programs:

- Full-day and part-day regulated child care centres;
- Regulated family child care;
- Nursery schools/preschools;
- Kindergarten;
- Head Start;
- Family resource programs.

Beyond this, it is necessary to collect data on government or employer-employee programs that may affect either the demand for or the financing and regulation of ECEC programs. For instance, there are cash benefits intended to assist parents with the financial aspects of ECEC; these are programs that will have an impact on the demand for and use of ECEC.

CURRENT PROBLEMS WITH ECEC DATA

Currently, Canadian data about ECEC programs are incomplete and inconsistent, reflecting the state of ECEC. Almost all early childhood education and care programs are within provincial/territorial jurisdiction with considerable variation across Canada. The two largest programs—kindergarten, usually located in the public education system and child care are under separate bureaucracies in almost all provinces/territories. In addition, child care services and nursery schools (or preschools) are often operated as separate programs although they may be under the same provincial/territorial legislation. These factors make data collection more difficult.

Although there have been some one-time-only studies of ECEC use patterns and surveys of some aspects of child care, there is no permanent, regular source of comprehensive information about the range of ECEC programs either on the demand side (data collected about parents) or the supply side (data collected about facilities). There are several exceptions to this blanket statement. The National Longitudinal Study of Children and Youth (NLSCY) collects some data on the use of ECEC programs. However, it is a temporary survey and ECEC is a minor item in its data collection, thus, it collects data on only a few variables of interest. Each province/territory collects useful administrative data but it is often not comparable across provinces/territories. And although data is collected regularly about public kindergartens in schools, these data are normally aggregated with data about other school grades. Canada's approach to ECEC data compares unfavourably with both the United States and most European countries; in these places ECEC data is far from perfect, but does provide some models for Canada to consider.

Because comparable ECEC data have not been regularly collected over the years, Canadian ECEC programs have, in a data sense, no recorded history. There are no statistical surveys that have asked consistent questions over a series of years to provide comparable data. There are no longitudinal price data, expenditure data, or data on quality of services, and only the beginnings of longitudinal data on child care use patterns for some families, and on child outcomes through the NLSCY.

PURPOSES OF COLLECTING ECEC DATA

Some key purposes of collecting and organizing data on ECEC programs are:

- To determine appropriate policy responses and to design policy (e.g., by identifying needs, preferences, use patterns, etc.);
- To monitor policies once implemented, to evaluate their effects over time, and to report to the public (e.g., are target groups being reached, has employment participation been affected, are child outcomes improving, what are the costs, are the clients satisfied?);
- To ensure accountability for public spending on programs (e.g., administrative data);
- To provide information to parents and service providers that will help them make better decisions about ECEC use and provision (e.g., child outcomes, quality indicators, and program characteristics);
- To assist the public and NGOs in evaluating the progress of Canada's children and their services (e.g., analyzing the gap between current supply and needs, analyzing benchmarks of progress in ECEC provision and child well-being);
- To provide cross-provincial and international comparisons on major features of use and effects (e.g., to monitor federal-provincial-territorial agreements or for international studies by OECD or as part of United Nations' activities).

INDICATORS TO MONITOR PROGRESS

This report discusses two broad categories of specific uses of ECEC data: first, to produce indicators monitoring progress and to identify potential problem areas and, second, for broader policy purposes, whether that is to analyze the effects of policy, to forecast future trends, or for basic research about families, children and early learning and care services.

Indicators permit comparisons—between jurisdictions, over time, and with commonly accepted standards. This report provides details about definitions and construction of four key ECEC indicators: availability, affordability, quality and

child, family and women's outcomes. It describes the data needed to construct these indicators, much of which is not regularly collected in Canada at this time.

PRODUCING DATA FOR POLICY PURPOSES

Although indicators can show trends, confirm successes, and identify potential problems, they don't usually, by themselves, provide explanations or permit conclusions to be drawn about cause and effect. Additional and more comprehensive research will always be required to answer complex questions, identify sources of benefits or causes of problems, propose solutions, and design appropriate policy responses. A second purpose of collecting ECEC data is, therefore, to contribute to the analysis of broader policy questions. Often this implies the collection and analysis of microdata—a data set containing information on a range of different variables for a large number of different families, facilities, or institutions. Some research questions can be analyzed using data from one point in time (cross-sectional data). Some research questions require data on the same set of families (or children, or centres, etc.) at different points in time. In particular, research questions relating to the effects of ECEC programs on child and family outcomes can best be answered with longitudinal or panel data.

In addition, there are useful research methodologies using techniques other than large data sets—for instance, qualitative research, evaluation research, and critical policy analysis. These methods may use observations, psychometric instruments, surveys, interviews and questionnaires and a variety of kinds of analyses of data.

WHAT ARE THE KEY TYPES OF DATA SOURCES?

There appear to be five general types or sources of data on ECEC programs and services:

- Demand for/use of/expenditure on ECEC services and programs (data collected from parents);
- Characteristics of services/clientele/workers/curriculum (data collected from facilities and staff, or by on-site observations);
- Child/family/parent outcomes that are affected by ECEC programs (data collected from families and children);
- Regulatory/program/administrative data (on funding, basic characteristics of services and clientele, collected in course of administration of programs and services);
- Supplementary and associated data (e.g., demographic data such as child population, mothers' labour force participation, mothers' incomes, etc.; data from a variety of sources).

CURRENT AND PAST CANADIAN ECEC DATA

- **Demand for/use of/expenditure on ECEC services and programs**
  Canadian National Child Care Survey (one-time-only, 1988);
  National Longitudinal Study of Children and Youth (longitudinal sample, on-going);
  Survey of Household Spending (cross-sectional survey, on-going; survey of household expenditures, no breakdown of child care spending by type of service);
- **Characteristics of services/clientele/workers/curriculum**
  Caring For A Living (one-time-only, 1991);
  You Bet I Care! (one-time-only, 2000);
- **Child/family/parent outcomes that are affected by ECEC programs**
  National Longitudinal Study of Children and Youth (longitudinal, on-going; no data on ECEC quality to link with child outcomes);
- **Regulatory/program/administrative data**
  Provincial/territorial administrative data are held by each jurisdiction. Data collected, definitions and the form in which data are held are not comparable across jurisdictions. See Table 2 for details;
  Summaries of cross-Canada administrative data have been published in *Early Childhood Education and Care in Canada (1992, 1995, 1998, 2001)* (summary and analysis of ECEC program use, service characteristics, and government funding

and regulatory programs, largely from administrative data);

- **Supplementary and associated data**

  Census (on-going, every five years; information on children and families, but no information on ECEC);

  Labour Force Survey (on-going, monthly; labour force participation of mothers by age of youngest child, no information on ECEC);

  Survey of Labour and Income Dynamics (longitudinal; some data on use of maternity/parental leaves, no other information about ECEC);

  Canadian Community Health Survey (on-going; health determinants, health status and health system utilization for communities across Canada; no ECEC data but some potential for such data collection).

PROVINCIAL/TERRITORIAL ADMINISTRATIVE DATA

The bulk of regularly collected data on ECEC is the data regularly collected by provinces/territories in the course of funding, licensing, monitoring and regulating these services. This has both strengths and weaknesses. Administrative data are often the only data available and are generally available on a more timely basis than data collected in a large-sample survey. Administrative data are particularly useful for producing statistical indicators and for examining some specialized questions that would require very large samples if investigated by random-sample methods, sampling the whole population.

The major drawbacks with provincial/territorial administrative data are gaining access to data that may be confidential and finding data that are comparable across provinces/territories. In addition, there are many gaps in currently collected data. This report provides a detailed review of provincial/territorial administrative ECEC data in a snapshot taken in 2001. In some provinces/territories, details of data collection may have changed somewhat since 2001 when this information was collected. However, this information provides a useful starting point and analyzes the differences in data definitions across jurisdictions and examines the different data collection methods used. The review covers data about child care centres (and nursery schools where these are regulated under child care legislation), regulated family child care homes, and kindergartens. The report discusses the potential uses of harmonized administrative data, particularly in relation to the four basic statistical indicators identified in chapter II and also discusses different possible approaches to harmonization.

RECOMMENDATIONS

Data, indicators and research can play a key role in strengthening ECEC policy and programs as well as in enhancing public accountability. The final chapter of the report presents six recommendations that could aid in improving the quality of reporting over time.

1. Developing new data collection vehicles

Regular collection of statistical data (probably by Statistics Canada) using three new vehicles is essential:

a) *A cross-sectional parent survey* about the use of a wide variety of ECEC services, including information about costs, family income and preferences;

b) *A survey of staff/teachers in ECEC programs* covering their education and training, compensation, experience, program organization and characteristics, characteristics of children and families, costs, revenues and user fees charged, and (periodically) on-site evaluations of quality;

c) *Longitudinal survey linking ECEC characteristics and quality to child/family outcomes.* There are several good models for this from random-assignment techniques to intensive, broad data collection such as that used in the National Institute of Child Health and Human Development (NICHD) study in the U.S.

2. Improving utilization and design of existing data collection vehicles. Small changes in existing data instruments could provide some data improvements.

3. Improving provincial/territorial administrative data. This would include improved data collection design, common data definitions (for use in indicators), improved access to data while respecting confidentiality and negotiated harmonization of data definitions.

4. Developing a Canadian policy and program database. Tracking innovations in program and policy design across Canada; providing a basis for analysis of program effectiveness.

5. Establishing a program of ECEC research. As neither basic data nor indicators are likely to be able to provide answers regarding causes and effects, a sustained program of research is required to examine complex questions. It should be noted that good data are essential for designing research.

6. Coordinating data collection and organization by establishing a coordinating body to design and move forward the data and research strategy.

IN SUMMARY

This report suggests a number of ways to begin to fill the gaps in Canada's ECEC data situation. As governments, community groups and researchers recognize the importance of ECEC for Canada, good data and research will be essential for moving ahead. While there may be more than one solution (or a solution with more than one component), it is now time to take the first steps to collaborate on devising and implementing a workable strategy for improving Canadian data on early childhood education and care.

SECTION 1

Introduction

THE NATIONAL DATA PROJECT: BACKGROUND

The purpose of this project is to propose a strategy with options—a "roadmap"—for developing reliable comparable data to inform Canadian early childhood education and care (ECEC) policy, research, and service delivery. The project was inspired and stimulated by the work that has been undertaken internationally by the Organization for Economic Co-operation and Development (OECD), by the European Union Child Care Network and by Canadian federal/provincial/territorial commitments to the agreement on Early Childhood Development (ECD) and the Multilateral Agreement on Early Learning and Care in 2003.

Canadian data about services and programs for young children are now incomplete—even haphazard. This project began with the premise that it would be desirable to collect, collate, analyze and disseminate pan-Canadian reliable data on programs relating to the care and education of young children that are comparable across provinces/territories. There are two main rationales for this perspective. First, there is wide agreement that public accountability for public spending, programs and services is essential. Second, good data are fundamental to designing social indicators and formulating intelligent public policy. These views have been strengthened in the last few years in the context of Canadian developments regarding ECEC as well as by work on ECEC in the international context.

Trustworthy, comprehensive data and well-designed indicators make it possible to track progress, assess best practices, support policy-making, monitor and measure outcomes and carry out public reporting. Public reporting on the whole range of ECEC services requires a variety of kinds of regularly collected data, a range of indicators based on this data, and research into program, policy and performance issues. Good data and research can contribute to understanding the nature of services and the populations they serve, the ways policies and services are structured and delivered, strengths as well as areas needing improvement, and help in assessing impacts and understanding if desired goals and objectives are met.

CANADIAN CONTEXT: CURRENT PRACTICES AND FEDERAL/PROVINCIAL INITIATIVES

Historically, most Canadian programs for young children have fallen within the mandate of health, education or welfare services under provincial jurisdiction. Generally, these have developed with considerable provincial/territorial variations. Even within provincial jurisdiction, however, there are often regional differences while explicit distinctions between education and care services mean that each has its own bureaucracy, legislation and regulations. In addition, there are a variety of associated service and income programs—some in provincial, others in federal jurisdiction. This has a direct impact on the delivery of ECEC services from the perspectives of both service providers and children and families.

Since 2000, federal and provincial/territorial governments (except Quebec) have signed two agreements regarding new federal funds for ECEC programs. The first, the September 2000 Early Childhood Development (ECD) initiative specifies that services for children 0-6 will be developed in four service areas:

- Healthy pregnancy, birth and infancy;
- Parenting and family supports;

- Early childhood development, learning and care;
- Community support services.

The announcement of this agreement said that:

> First Ministers believe in the importance of being accountable to Canadians for the early childhood development programs and services that they deliver. Clear public reporting will enhance accountability and will allow the public to track progress in improving the well being of Canada's young children. Regular measuring of, and reporting on, early childhood development provides governments and others with a powerful tool to inform policy-making and to ensure that actions are as focused and effective as possible (Canadian Intergovernmental Conference Secretariat, 2000).

A second federal/provincial/territorial (except Quebec) agreement, more explicitly tied to ECEC programs, was announced in March 2003. The purpose of this agreement, termed "the first step to a national child care program", is explicitly to "improv[e] access to affordable, quality, provincially and territorially regulated early learning and child care programs and services". The announcement stated that "Governments recognize the importance of being accountable to Canadians and have committed to transparent public reporting that will give a clear idea of the progress being made in improving access to affordable, quality early learning and child care programs and services" (Federal/Provincial/Territorial Ministers Responsible for Social Services, Toronto, 2003).

Specific elements for public reporting and timelines are specified. These two agreements fall under the framework of the Social Union Framework Agreement (SUFA), signed by the federal government and provinces (except Quebec) February 4, 1999. Under SUFA, all the governments committed to:

> Monitor and measure outcomes of social programs and report regularly to constituents on the performance of these programs; share information and best practices to support the development of outcome measures, and work with other governments to develop, over time, comparable indicators to measure progress on agreed objectives (Canadian Intergovernmental Conference Secretariat, 1999).

INTERNATIONAL CONTEXT

Currently, there is considerable international interest in ECEC. This interest is best exemplified by the cross-national work of the Organization for Economic Co-operation and Development (OECD). Motivated by ongoing work on life-long learning, in 1998 the OECD launched the *Thematic Review of Early Childhood Education and Care*, a comparative study of ECEC programs and services. The first round of countries studied were Australia, Belgium, the Czech Republic, Denmark, Finland, Italy, the Netherlands, Norway, Portugal, Sweden, Australia, the U.S. and the U.K. A second round of country reviews including Canada began in 2002.

The Thematic Review of ECEC is based on the premise that equitable access to high quality ECEC can:

> strengthen the foundations of lifelong learning for all children and support the broad educational and social needs of families… while equity concerns have led policymakers to focus on how access to quality early childhood services can mediate some of the negative effects of disadvantage and contribute to social integration (OECD, 2001:13).

Among the objectives of the Thematic Review are:

> to document and better understand some of the critical issues and concerns, to identify feasible policy options suited to different contexts, and to highlight particularly innovative policies and practices and
>
> …to identify the types of data and instruments to be developed to strengthen information collection, policy-making, research, monitoring and evaluation in the early childhood field (OECD, 1998, cited in Neuman, 2000: 3).

Developing Comparable Indicators in Early Childhood Education and Care, a paper prepared for the Thematic Review, proposes a conceptual framework for ECEC data (Rostgaard, 2000). The paper describes the distinctions in approaches in different countries' situations that have an impact on approaches to data and monitoring:

- Much like Canadian provinces/territories, OECD countries have developed different institutional systems based on their overall objectives for young children. For example, those countries whose early childhood programs are based in the education system tend to have a policy emphasis on pedagogical and academic objectives; those countries with more emphasis on safe, healthy environments for young children while parents work tended to set up programs within the jurisdiction of social services or welfare;
- Also like Canada, some countries have established a mix of direct service programs with cash benefits to assist parents with the cost of ECEC;
- In many countries, there are different services and bureaucracies for children over and under 3 years of age;
- There is a range of approaches to ECEC as private or public services.

While recognizing that there are national differences in systems for young children and that these differences are reflected in a variety of approaches, a holistic approach is proposed to incorporate the whole spectrum of ECEC data:

> ...The development of concepts should be based on an assumption of functional equivalence. This implies the adoption of a cross-sectional, cross-benefit approach that can acknowledge the various forms of day care provisions available in a country, rather than limiting the framework to specific forms of provision which can be found generally across countries, such as educational services for the 3+ year olds only. A more holistic approach to the provision of early years education is thus recommended which acknowledges the national differences, including provision such as family day care and care for the under-threes. Also, the functional equivalence approach implies the inclusion of leave schemes as these often function as a complementary benefit to ECEC services (Rostgaard, 2000: 4).

The summary report of the first stage of the Thematic Review was released in June 2001. This landmark comparative report, *Starting Strong: Early Childhood Education and Care* is based on detailed studies of ECEC policy and provision in each of the 12 participating countries. The study concludes that eight interrelated approaches[1] to policy are the "key elements...that are likely to promote equitable access to quality ECEC" (OECD, 2001: 125). Two of the eight "policy lessons" are especially pertinent to the National Data Project, stressing the importance of good data in ECEC policy and programs:

- Systematic attention to monitoring and data collection. Coherent procedures for collecting and analyzing data on the status of young children, ECEC provision, and the early childhood workforce are required.
- A stable framework and long-term agenda for research and evaluation. Sustained investment to support research on key policy goals is required as part of a process of continuous improvement (OECD, 2001).

Following the publication of *Starting Strong* in 2001, the OECD began to hold a series of international workshops on issues pertinent to ECEC. A workshop in 2002 discussed ECEC data, with specific reference to the need for better data vis-a-vis the OECD's Indicators of Education Systems project (INES). The state of ECEC data in the OECD countries was discussed and plans for follow-up were endorsed by the participating countries including Canada (OECD, 2002).

Another OECD international workshop in early 2003 discussed financing of ECEC programs in different countries. The report commissioned for the workshop, entitled *Financing ECEC Services in OECD Countries* (Cleveland and Krashinsky, 2003) recommended and provided an example of collection of detailed comparative data on funding arrangements in different countries. Further, they recommended calculating financial profiles of different typical families for each country, indicating how the sum of different types of assistance affects several different family types and income levels.

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[1] 1. A systemic and integrated approach to policy development and implementation; 2. A strong and equal partnership with the education system; 3. A universal approach to access; 4. Substantial public investment in services and infrastructure; 5. A participatory approach to quality improvement; 6. Appropriate training and working conditions for staff; 7. Systematic attention to monitoring and data collection; 8. A stable framework and long-term agenda for research. (*Starting Strong* Summary, Childcare Resource and Research Unit, 2001).

DEFINITIONS OF ECEC

One of the findings of the OECD Thematic Review is that "A systematic and integrated approach to policy development and implementation" is one of the eight keys to equitable access to quality ECEC (2001). As Haddad describes, historically, ECEC services began as separate programs in most countries (2002). However, while those in European countries have generally moved beyond what has been described as "policy incoherence", Canadian ECEC has not yet begun to do so (Beach & Bertrand, 2000). The observation that Canadian ECEC services exist in distinct silos—child care, kindergarten, nursery schools/preschools, and family support programs are all operated and administered quite separately—is not a new one. What is new in the past five years or so, however, is that the Canadian conception of "quality child care" has shifted so that it is now widely understood to be closely linked not only to parents' activities (usually employment) but to the idea that early childhood education makes a strong contribution to optimal healthy development (Friendly, 2001). Officially, a first clear acknowledgement of this idea is stated by all provinces/territories (except Quebec) and the federal government in the objective to the March 2003 Multilateral Agreement on Early Learning and Care: "The objective of this initiative is to further promote early childhood development and support the participation of parents in employment or training by improving access to affordable, quality early learning and child care programs and services" (2003).

Thus, although public policy and service delivery have not shifted in Canada, it is beginning to be recognized that it is possible and desirable to include both "care" and "early childhood education" within one inclusive system of services as European nations do (see, for example, McCain & Mustard, 1999 or Friendly & Lero, 2002). The terms early childhood education and care or early learning and care underline a conceptual shift in emphasis away from segregated services—oriented or restricted to children with working parents, or to advantaged children whose parents want to provide optimal developmental opportunities, or poor children, children with disabilities, children whose mother is in a training program, children at risk—to the idea that a coherent, well-designed, inclusive system of services can provide both care and early education for *all* children, and support for their parents, both in and out of the paid workforce. A recent Canadian study of ECEC services defines them as:

> child care, "head start" programs, kindergartens, nursery schools, playgroups, family resource programs and parenting centres — all designed to meet, at least in part, families' and young children's needs". (Beach & Bertrand, 2000: 6)

The OECD sums up the contemporary wisdom about this when it suggests that a broad and holistic view of ECEC:

> Reflects the growing consensus in OECD countries that "care" and "education" are inseparable concepts … the use of the term ECEC supports an integrated and coherent approach to policy and provision which is inclusive of **all** children and **all** parents regardless of their employment status or socioeconomic status. This approach recognizes that such arrangements may fulfill a wide range of objectives including care, learning and social support (OECD, 2001: 14).

The framework that this project has used fits these conceptions. Adapting the contemporary definition of ECEC cited above and using the holistic or "functional approach" suggested by Rostgaard in her paper on data and indicators commissioned by the OECD (2000), it includes a range of "care" and early childhood education, and family resource programs. Daytime services and programs for children under age 6 in organized settings are considered. However, before and after-school programs for children age 6-12, specialized programs for sick and institutionalized children and unregulated or "informal" child care arrangements are not. It has not included public or private education activities beyond kindergarten age nor the range of parent education programs specifically aimed at improving parenting skills. As a starting point, the following Canadian programs and services are included in a definition of ECEC:

- Full-day and part-day licensed child care centres;
- Nursery schools/preschools;
- Regulated family child care;
- Kindergarten (4 year-olds and 5 year-olds);
- Family resource programs.

In addition, government or employer-employee programs that deliver cash or tax relief designed to assist parents with the financial aspects of ECEC (such as the Child Care Expense Deduction) are included in this report in so far as possible although information is not fully available about the range of provincial/territorial programs that fit this definition. Maternity/parental leaves and benefit programs that—especially in the first year or so of a child's life—have an impact on the demand for and take-up of ECEC services, other child care leaves, top-up benefits by employers for parental or child care leaves, and payments to parents or child care vouchers have been included where these affect the cost, use or supply of services and where information is available.

THE STATE OF CANADA'S ECEC DATA: A THUMBNAIL SKETCH

This report concludes that Canadian data about ECEC services and programs are—like the services themselves—incomplete and nonsystematic. Indeed, the current state of data in this field may be more inadequate than in other comparably sized service sector. A study of the early childhood workforce commissioned by Human Resources Development Canada commented:

> The work of this sector study, like other national studies of child care before it, makes obvious the weaknesses of data collection in almost all subjects related to child care. This points out the need for the development of a coherent strategy to collect data and to coordinate a related research agenda which will use these data in the most effective way. (Beach, Bertrand & Cleveland, 1998: 142)

While all the provinces regularly collect administrative and program data (described in considerable detail in section IV) in the course of regulating, licensing and funding regulated child care services, these data are often not comparable from province to province, and much of it is not in a form that is accessible for analysis. Across Canada, there is no regular collection of national data about nursery schools, child care, kindergarten, early intervention or family resource programs, or about the families using them (with the partial exception of the National Longitudinal Study of Children and Youth [NLSCY]—see below). Although limited data are collected regularly about public kindergarten in schools, these data are nearly always aggregated with data about other grades.

As a result, ECEC has, in a data sense, little recorded history. With regard to ECEC, there are no surveys or studies that have asked consistent questions over a series of years to provide comparable data and, thus, to "allow the public to track progress in improving the well-being of Canada's young children" (as the ECD initiative says). Almost all of the data upon which policy makers rely or which have been reported in various studies come from educated guesses by policy experts or advocates, are based on one-time-only studies (usually conducted by academic researchers, for example, *You Bet I Care!* [2000] or *The Canadian National Child Care Study* [1998]) or are derived from aggregated provincial/territorial administrative program data (like, for example, *The Status of Day Care in Canada* [Human Resources Development Canada, from 1971 to 1998] or *Early Childhood Education and Care in Canada* [Childcare Resource and Research Unit, 1992, 1995, 1998 and 2001]).

Even the most straightforward questions pertinent to Canadian ECEC cannot be answered with confidence. For instance, what is the average hourly price of care of different services in different locales, and by how much has it increased in the last five years? How many children of what ages attend full-time child care or resource programs? How many children are in both kindergarten and a child care centre? How many children attend kindergarten for full-days every day? What percentage of the families getting child care subsidies are single parents, recent immigrants or are in training/education programs? Is the quality of regulated child care getting better or worse? What types of child care is the Child Care Expense Deduction spent on? And so on.

Since these and other straightforward questions cannot be answered, it is no surprise that more complex, policy-oriented questions cannot be answered either. This includes questions such as: What is the relationship between a child's participation in an ECEC service of poor/mediocre/excellent program quality and "readiness to learn" in the Canadian context? What is the relationship between participation in a family resource program and parenting effectiveness? What is the

unmet need for full-time (part-time, flexible hours, seasonal) child care, and what types of families are underserved? How does the affordability and quality of ECEC services affect women's and men's lifetime/short-term employment patterns and incomes? And so on.

As the OECD study *Starting Strong* points out, few countries have fully developed comprehensive schemes for ECEC data and research. However, it seems fair to say that in countries other than Canada, more data about ECEC services and programs is collected, more is collected on a regular basis, and (at least in the United States), there are more well-designed one-time-only studies (usually conducted by academic researchers) than there are in Canada. In particular, there are a number of regular surveys in other countries that focus on families using ECEC services, on ECEC facilities themselves, and—again in the United States—on examination of the child and family outcomes that may be affected by these services and programs. From this perspective, Canada has—in a sense—a positive advantage as there are already relatively well developed models and considerable knowledge upon which to draw in improving the state of ECEC data.

KEY DATA CONCEPTS

When thinking about the collection, organization, analysis and use of the kind of basic data that this project set out to consider, a number of key concepts are fundamental.

- Data may be collected **regularly** (monthly, annual, every five years), or it may be **one-time-only** (like, for example, *You Bet I Care!*). Regular, recurring data collection allows for monitoring performance of ECEC services over time.
- Data collection may be **longitudinal** (e.g., the National Longitudinal Study of Children and Youth), in which case the same group of persons or facilities is followed over time, or it may be **cross-sectional** (e.g., the Labour Force Survey), so that a different group of persons or facilities is surveyed each time the data collection is completed.
- A data source may provide **microdata** (e.g. *the You Bet I Care!* or the NLSCY) in which case the data source has information on individual families or services that can be re-analyzed and re-categorized by researchers. Or the data source may provide only **aggregate** data (this is typical of provincial administrative and program data, in which case the data are not set up in a way so it can be re-analyzed in new ways by researchers.
- A data source may be collected under the authority of a **statistical agency** with power to compel participation and with considerable experience in data collection and corresponding financial resources (e.g. Statistics Canada). Or data may be collected by a researcher, a consulting firm or an NGO, where participation is voluntary. This may mean that sample construction and sample response bias are, perhaps, problematic.

STRUCTURE OF THIS REPORT

Section II of this report analyzes the purposes and requirements for which ECEC data could—and should—be collected, organized, analyzed and used. One of these purposes is the preparation of statistical indicators; section II discusses the value of indicators in assessing the availability, affordability, and quality of different types of ECEC services and of indicators of potential outcomes fostered by those services. A second purpose for ECEC data is to support a program of research (or, as the OECD has stated this policy lesson "a stable framework and long-term agenda for research and evaluation") for the purpose of addressing relevant policy questions. A number of recommendations emerge from this discussion.

Section III of this report briefly outlines and describes current and past data collection in Canada and presents some international data approaches to ECEC data that may be useful in Canada.

Recognizing that very little administrative data comes from Canadian federal sources, section IV outlines what types of provincial/territorial administrative, program and monitoring data (called "administrative data" in this report) about ECEC services are currently collected. It also looks at the strengths and weaknesses of this administrative data for answering various questions and for producing indicators of progress and recommends reforms.

Section V focuses on conclusions and recommendations.

SECTION II

Analyzing Canada's need for ECEC data

"Data" are not simply random facts about a subject but information that is collected, organized and analyzed for specific purposes. The purposes for which data are needed affect the kinds of data to be collected, the form in which it is collected and the way in which it is best presented for use.

Some key purposes for collecting data on ECEC services and programs are:

- To design policy and determine policy responses (e.g., by identifying needs, preferences, use patterns etc.);
- To monitor policies once they are implemented, to evaluate their effects over time, and to report to the public (e.g., are target groups being reached? Has employment participation been affected? Are child outcomes improving? What are the costs? Are clients satisfied?);
- To ensure accountability for public spending on programs. (This is one use of administrative data.);
- To provide information to parents and service providers that will help them to make informed decisions about ECEC use and provision (e.g., child outcomes, quality indicators and program characteristics);
- To assist the public, NGOs and governments in evaluating the progress of Canada's children and their services (e.g., analyzing the gap between supply and needs, analyzing benchmarks of progress in ECEC provision and child well-being);
- To provide cross-national and international comparisons on major features of use and effects (e.g. to monitor federal-provincial-territorial agreements, for international studies like the OECD Thematic Review, or to report to the United Nations, for example, on progress on the Convention on the Rights of the Child or the Convention to Eliminate Discrimination Against Women).

This section reviews why reliable ECEC indicators would be a desirable thing to construct, elaborates on a basic set of ECEC indicators and describes the kinds of basic data and the new data sources that would be necessary in order to do this. In addition, a rationale for a long-term, stable ECEC research agenda is discussed. Finally, ideas drawn from other jurisdictions that could have lessons for Canada about how this work could begin are presented.

BASIC DATA AND INDICATORS

In order to fulfill the kinds of purposes identified above, both basic data and statistical indicators (sometimes called social or performance indicators) are needed. Reliable, comparable, regularly collected data are a fundamental requirement for construction of appropriate indicators. Without a range of reliable, comparable and timely data, constructing good indicators is not possible.

An indicator is designed to provide consistent information about some important area of performance of a system. For example, when driving a car, we regularly consult different indicators of the car's performance (the speedometer, the odometer, the oil warning light, the fuel gauge, the tire pressure, and the dipstick). These indicators provide packaged information about the functioning of the car. Changes in the indicators may cause us to change our behaviour to improve the car's functioning (e.g., stopping for gas, oil, air, or repairs). The national economy has a similar set of performance/statistical indicators: the unemployment rate, the Consumer Price Index, the rate of growth of GDP, the prime interest rate, the exchange rate of the Canadian dollar, the current account deficit, the government budget balance, etc.

Indicators permit comparisons—between people, services or jurisdictions and over time using commonly understood standards. However, although indicators can show trends, confirm successes, and identify potential problems, they usually don't by themselves provide explanations or permit conclusions to be drawn about cause and effect. More comprehensive research is required to answer complex questions, identify sources of benefits or problems, propose solutions, and design appropriate policy responses.

It was pointed out earlier that the range of objectives and dimensions of performance of the ECEC sector is broad. Thus, the range of indicators (and the basic data required to construct them) must be correspondingly broad. A modest selection of possible ECEC indicators includes: indicators of availability of service, affordability indicators (expenditure /income ratio), price and costs of care indicators, quality of care indicators, child outcome indicators, parental employment and income indicators, work/family balance indicators, women's equality indicators, and so on. For each of these, there are issues of timeliness of data, development of a historical series of comparable readings of the data and indicator, definition of the appropriate variables, and optimum methods of data collection, organization and analysis.

BASIC DATA REQUIREMENTS

The basic data required both to develop relevant indicators and to provide the basis for a variety of kinds of additional research are likely to be related to one or more of the following subjects:

- Data about the families using ECEC programs and arrangements. These include a range of demographic data, parental preferences, parental satisfaction, use patterns (demand and use information);
- Data about ECEC programs including the range of services and cash/non-cash benefits, characteristics of programs (supply information);
- Data about the price of programs (fees), the cost of programs and amount of government and other funding provided;
- Data about what impacts ECEC has on the range of players at whom they're aimed: the children who use them, the parents and families, women in the workforce, etc. (outcome information).

FOUR KINDS OF BASIC ECEC INDICATORS

The following section discusses four simple essential ECEC indicators. Table 1 provides information about these and the sources of data—both existing and proposed sources—required for each. The section following the table discusses three new data sources proposed to fill the gaps in data needed to construct these four indicators.

INDICATORS OF AVAILABILITY

Simple indicators of the availability of ECEC programs would permit determination of whether the overall availability of ECEC meets the need or demand and whether, over time, availability is improving or deteriorating. There are a number of ways that such indicators can be constructed. One could, for example, determine availability of ECEC services for the 70% of mothers with young children who are in the workforce as well as those in training or education. To do this, data would be needed on the numbers of children under age 6 with employed/self-employed/in training or education mothers, whether they work/study full- or part-time and the number of ECEC spaces available on an appropriate part- and full-time basis for these children. Simple indicators such as this would, of course, not take account of some details and would not inform us about:

- How many two-parent families work offsetting shifts because they cannot afford, or do not wish to use, ECEC services;
- How many children attend more than one ECEC program (for example, a child care centre and kindergarten);
- How many children are being cared for by nannies or other unregulated caregivers;
- How many children are cared for by siblings or other relatives;
- How many parents are limited in their employment because appropriate child care is unavailable;

- How many parents who are not in the paid labour force would like their children to go to an ECEC program?

This approach would assume that the group for whom ECEC programs should be available is "children of working parents". Another simple availability indicator could be designed based on the presumption of universality—that all children including those with a parent not in the paid workforce would be the population for whom ECEC would be intended. It would be constructed using the total number of children aged 1-6 years as the criterion, not the number of children with mothers in the paid workforce. Thus, there is a connection between the policy goals and construction of an indicator.

A simple, commonly used availability indicator would be a basis upon which to build research that could answer more complex questions.

INDICATORS OF AFFORDABILITY

An indicator of affordability usually forms a ratio of the price of ECEC to the income of the family. More generally, the indicator is a ratio of some measure of the cost of services to some measure of income or ability to pay. The measure of the cost of the services could come from administrative data collected by a province, or from a statistical survey of parents about what prices they pay for ECEC, or the total of their ECEC expenses, or could come from a survey of facilities about what prices they charge, and what are the costs of producing services. The measure of income could be family income, or mother's income, before tax or after tax, and would probably come from a statistical survey. Other useful indicators include the parents' share of the full cost of an ECEC space.

Currently only sporadic data are available on the costs and prices of ECEC services. While *You Bet I Care!* (2000) was not designed to collect parent data, it did collect fee data but on a one-time-only basis. On the other hand, while the NLSCY collects extensive data about parents and children, it does not collect any data on ECEC prices or parent expenditure levels. While a number of provinces/territories regularly collect administrative data about parent fees, data definitions vary across jurisdictions and, generally, breakdowns of fee data by parent groupings are not available. Table 1 suggests some alternative affordability indicators.

INDICATORS OF QUALITY

Research shows that the quality of ECEC programs has an impact on young children's development. Indeed, an extensive American review of the science of early childhood development has pointed out that "the positive relation between child care quality and virtually every facet of children's development that has been studied is one of the most consistent findings in developmental science" (Shonkoff & Phillips, 2001: 313). Therefore, good indicators of ECEC quality are essential. To construct such indicators, both commonly used instruments (observational scales like those designed by Harms, Clifford and others—the ECERS-R/ITERS/FDCRS) (Harms, Clifford & Cryer, 1998; Harms, Cryer & Clifford, 1990) and predictors that research tells us are associated with child outcomes (staff qualifications, wages, staff/child ratios, group size, staff turnover) can be used. These can produce a snapshot that tells us about the quality of existing services at a single point in time. The model for this data collection exists in the recent one-time Canadian study *You Bet I Care!* (It should be noted that an American one-time-only study [*Cost, Quality and Child Outcomes*] using a similar research design to *You Bet I Care!* collected child outcome data as well as very detailed cost data. It linked data from known predictors like staff training and observational scales like the ECERS-R and ITERS to child outcomes). In order to monitor improvement or deterioration of quality, these data would have to be collected consistently over time.

Considering the emphasis that has been placed on concepts like "readiness to learn", lifelong learning and "promoting early childhood development" in Canada over the past few years, it would appear that a well-designed, common, understandable and valid ECEC quality indicator is a basic requirement for improving service delivery, for accountability and for policymaking.

INDICATORS OF OUTCOMES

As the beginning of this report pointed out, ECEC is a multifaceted service with multiple target groups—children, parents, women, and the community. Thus, it would be appropriate to have a range of outcome indicators that address appropriate outcomes for the various target groups.

CHILD OUTCOMES

In recent years, there has been considerable Canadian interest in child outcomes and the factors that contribute to them. Generally, researchers agree that both educational and social outcome indicators are desirable. The National Longitudinal Study of Children and Youth (NLSCY) is a major longitudinal survey that collects child outcome data for a large, representative group of Canada's children. This survey includes a wide range of family, school, and community input variables and regularly produces a range of behavioural, cognitive, and other outcome indicators.

Although the NLSCY collects information about the utilization of ECEC services and parent-reported information about some characteristics of services, it does not include either measures of observed program quality or related predictors that child development research has established to be important. In addition, detailed information on child care use is collected only from employed parents or those in school (although participation in kindergarten is collected from all parents). Despite some improvements made to the child care section of the NLSCY in Cycle 3, there is still only limited data collected that can be used to draw conclusions about the quality of ECEC services. As research like the *Cost, Quality and Child Outcomes Study* and many other studies support the idea that it is specifically the quality of ECEC programs rather than participation per se that determines child outcomes, research—in addition to the NLSCY or additional data collected as part of it—is needed.

Both for indicators of child outcomes and for broader policy research, a carefully designed longitudinal study focused on the effects of ECEC on children and families would be extraordinarily useful. The key problem in much of this kind of research is separating out the effects of ECEC services on children from the effects of family, community and background factors. Since families choose the type and quality of ECEC services their children will receive, family characteristics and the quality of services used are normally confounded in the available data. There are several strategies to get around this problem. A first choice would be a randomized control study in which children are randomly assigned to types of care. Even though this is an ideal design from the researchers' point of view, and it has often been used, it is not necessarily ideal from the family's point of view, leading to possible ethical problems. The second design would be one like the NICHD study (National Institute of Child Health and Human Development) in the U.S. in which families are studied in whatever arrangements they have chosen but a great deal of effort is made to get very detailed information about family characteristics and the quality of ECEC they use in order to separate these factors statistically.

From a practical perspective, with the exception of a few small scale studies like the Victoria and Vancouver Day Care Projects (Goelman & Pence, 1989), in spite of the demonstrated impact of ECEC on child outcomes, there has been very little Canadian research of any kind that has linked child outcomes—cognitive, educational, social—with ECEC in the kind of detail that the body of ECEC research suggests is warranted.

OUTCOMES FOR FAMILIES AND FOR WOMEN

In addition to child outcomes, construction of key indicators pertaining both to families and to women would be desirable for answering questions linked to goals for ECEC. Indicators linked to constructs like women's equality, balancing work and family responsibilities, and reducing reliance on social assistance would reflect the potential of ECEC services to have multiple impacts.

The table that follows shows the preceding information about these four indicators together with sources for required data including existing and new sources of data.

TABLE 1 **Proposed indicators**

Indicators	Breakdown	Data Sources
AVAILABILITY		
Number of spaces (including centres, family child care, nursery schools, kindergarten) as a % of children according to different definitions of "need"	By geographical area, type of service, ages of children, hours/weeks of service available, full-time/part-time, work and income status of parents, auspices	· Facility survey · Provincial/territorial administrative data · Parent survey
% of children enrolled in each type of ECEC service		· Labour Force Survey
AFFORDABILITY		
% of family/mother's income spent on ECEC Government funding as % of average cost; parental payments as % of average cost; donated services as % of average cost; Child Care Expense Deduction	By geographical area, type of service, ages of children, hours/weeks of service available, full-time/part-time, work and income status of parents, auspices	· Facility survey · Parent survey · Provincial/territorial administrative data · Household Expenditure Survey · Labour Force Survey · Provincial/territorial administrative data · Parent survey
QUALITY		
ECERS/ITERS/FDCRS scales Predictors (staff training education, ratio, group size, wages,etc.)	By geographical area, type of service, ages of children, hours/weeks of service available, full-time/part-time, work and income status of parents, auspices	· Facility survey · Provincial/territorial administrative data
OUTCOMES		
Child outcome measures (social, cognitive, academic)		· Longitudinal research · Other research
Work/family balance		· Parent survey · Other research

FILLING THE GAPS: NEW DATA REQUIREMENTS

To fill the current gaps in basic data necessary to construct the four indicators identified in the preceding section as well as to provide data necessary for basic policy research, several new data collection vehicles are required. Minimum requirements for essential data could be met through construction and implementation of:

- A cross-sectional parent survey;
- A facility/program/provider survey;
- Longitudinal study linking ECEC use and quality to child outcomes; and
- Collection of detailed data on child, family and women's outcomes.

These would enable regular data collection to fill some of the identified gaps. The next section describes these. In addition to these new data collection vehicles, it would be useful to amend some existing surveys to collect specific data on early childhood learning and care. These are discussed in a following section as well. Finally, in the last section of this chapter, a program of research is discussed and proposed.

NEW DATA COLLECTION VEHICLES

1. CROSS-SECTIONAL PARENT SURVEY

- Could be either designed as an add-on to the Labour Force Survey (50,000 households), or added to the Canadian Community Health Survey (160,000 households).
- Survey would use an appropriately designed sample to allow a range of kinds of data analysis.
- Annual topics would include: ECEC use patterns (types of care, hours); ECEC characteristics (convenience, urban/rural location, auspice, price, subsidy, Child Care Expense Deduction claims); child characteristics (age, sex, disabilities); family characteristics (employment, wage, other income, education, marital status, family composition, etc.); use of maternity/parental leave, access to benefits; other (full/partial child care subsidy, unable to access subsidy, etc.)
- Additional topics in expanded survey (every 3 years) such as ECEC use patterns for all children in family; ECEC characteristics for all children in family; parental preferences and satisfaction; ECEC search patterns and problems; patterns of child care use through time.
- Parents with children aged 0-12 would be included in the survey regardless of employment status.
- Could draw on work previously done for the one-time-only National Child Care Study (1988).

2. SURVEY OF ECEC FACILITIES AND PROVIDERS

- Annual survey of programming, financial, staffing and compensation issues in facilities providing ECEC services. Topics covered would be similar to those included in the recent *You Bet I Care!* (survey of full-day centres and family homes; the range of services covered would be expanded to include nursery schools, school-age programs, unregulated care, family resource programs, kindergarten. The survey would include more details on costs and revenue sources, and on staff benefits than YBIC!.
- Annual topics would include: costs of services, sources of revenues, characteristics of facility and its programs/services, number and characteristics of children served; number of full-time/part-time/casual staff, education, training, wages, benefits, hours, previous job experience of staff members, staff turnover and other topics as in YBIC!.
- Every three years, this survey would be linked to on-site observations of quality using accepted instruments of quality assessment (such as ECERS-R /ITERS/FDCRS and Arnett scales) in the full sample of facilities or a subset of the full sample. (Quality measured by these scales has been shown to be strongly predictive of child outcomes in American research).
- Survey would use an appropriately designed sample to allow a range of kinds of data analysis.
- Would include sub-surveys of staff, directors.

3. RESEARCH LINKING ECEC, QUALITY AND OTHER CHARACTERISTICS TO CHILD/FAMILY OUTCOMES

- Longitudinal research is ideal to assess the effect of variations in quality and programming in early childhood education and care programs on child and family outcomes. (These effects have been identified in research in the United States and in Europe but not conclusively in Canada.)
- This research should be able to assess differences in effects across particular types of families (e.g., low-income, immigrant, Aboriginal, single parent, two parent). (Although the work of the NLSCY would inform this research [it includes detailed information on child and family outcomes], the NLSCY currently includes neither data on predictors of quality nor on-site quality observations in a range of ECEC facilities.)
- In order to disentangle the role of family background and innate characteristics from the direct effects of variations in

the quality of care and education, research should collect information on a wide range of family and child characteristics, and other factors influencing child outcomes (like the NICHD study).

- Research linked to family employment and family functioning goals and women's equality goals would be pursued as well. The same data set should collect information related to a range of outcomes.

ADDITIONS TO EXISTING DATA COLLECTION VEHICLES

Existing data collection vehicles and sources such as the Census, Labour Force Survey, Consumer Price Index, Survey of Household Spending, taxation statistics, National Graduate Survey, Education in Canada and the Employment Insurance administrative database could contribute directly to enhancing knowledge and understanding about ECEC in Canada.

- The Consumer Price Index could track changes in the fees for different types of ECEC charged to families across the country. This would create a data series of variations over time.
- The Survey of Household Spending could provide more detailed information about ECEC spending by distinguishing parental expenditures on different types of child care, rather than treating child care as a "lump".
- While some countries (for example, the United States) use their Census to collect data about ECEC use and arrangements in the population, the Canadian Census includes no questions about ECEC or child care arrangements.
- The Labour Force Survey could provide additional information in a variety of ways. For example, while *Labour Force Characteristics of Canadians including mothers by age of youngest child* publishes data on children by labour force status of mothers, any analysis that includes labour force status of fathers requires special tabulations. In addition, the LFS does not collect data on child care arrangements. In the past, several one-time-only surveys attached to the Labour Force Survey have been used to collect more detailed child care data (Canadian National Child Care Survey, 1988; 1981 Survey of Child Care Arrangements, 1982). Supplementing the Labour Force Survey on an occasional (but recurrent and regular) basis could provide a very useful addition to the current data source.
- Employment Insurance Benefits data includes mothers and fathers receiving maternity/parental benefits. While this administrative data can provide some data about those who have received maternity/parental benefits (number of beneficiaries in a year, number of initial claims that included maternity/parental benefits, etc.) it has no provision, for example, to collect data about new parents who do not receive maternity/parental benefits due to ineligibility (hours, self-employed, out of labour force).
- Taxation statistics could provide additional useful data about the Child Care Expense Deduction. Currently, while it can provide the number of CCED claimants by income, family type, age and sex, it does not include data about how the tax deduction is used (e.g. type of ECEC) in an accessible form.

PROGRAM OF RESEARCH TO ADDRESS COMPLEX POLICY QUESTIONS

The OECD's Thematic Review found research to be one of the eight keys to equitable provision of quality early childhood education and care. *Starting Strong*, the Thematic Review's summary report describes the idea of a "stable framework and long-term agenda for research and evaluation," recommending that:

> As part of a continuous improvement process, there needs to be a sustained investment to support research on key policy goals. The research agenda also could be expanded to include disciplines and methods that are currently underrepresented. A range of strategies to disseminate research findings to diverse audiences should be explored (OECD, 2001).

As we pointed out earlier, neither basic data nor constructed indicators are likely to be able to analyze cause and effect. As one of the major purposes for ECEC data is to contribute to understanding of broader policy questions, the regular collection of the types of data required to produce the statistical indicators listed above could also provide data to form the basis for research into broader policy questions. However, many important research questions are complex and require other approaches.

One kind of methodology that may address some broader policy questions is analysis of microdata. Organization of an integrated ECEC microdata set could contribute to Canada's ability to answer broader policy questions—sometimes

cross-sectional and sometimes longitudinal—by allowing researchers to test hypotheses. To analyze relationships using microdata, all the relevant variables need to be collected in the same data set. It is no use having data on child care use patterns from one data set and data on parents' incomes from another data set. In order to assess the relationships between income and child care use, it is necessary to have data on incomes and child care use for each family (and data on other variables that might influence child care use patterns for each family as well). This means that data collection needs to be organized with the potential questions of interest in mind, so that all the necessary variables for analysis are collected for each family (or child, or centre etc.). It also implies that data collection will need to evolve as the research questions of interest evolve. New variables may need to be added to existing questionnaires, and existing questions will have to be revised over time in consultation with the research community.

Other methodologies using quantitative and qualitative methods, evaluation research, and policy analysis are important. Observations, surveys, questionnaires and interviews can all contribute to analysis of a variety of research questions. A program of research such as an expanded version of the previous HRDC Child Care Visions program (Social Development Partnerships) could provide answers to complex research questions at different levels of analysis. Knowledge about child development, family and community functioning and best practices would strongly contribute to program and policy development.

The kinds of broader policy-related questions that a long-term stable, long-term ECEC research agenda could answer could include such things as:

- What factors affect fertility decisions? What role does income, the cost of raising children, the cost of child care, the generosity of parental benefits and leave and other factors have in fertility decisions? What policies and other factors determine the length of time taken off work at a child's birth and the division of that time between father and mother? What are parents' goals for their children?
- How do cultural factors, income, education and skills, the number and ages of children, the price, availability and quality of child care, taxation, social assistance and other factors affect the allocation of each parent's time to employment, education and home work? Is this decision different for single parents? How? How do children and the price, availability and quality of child care affect a mother's choice of occupation, and decisions about promotion? How are the patterns of child care use different for families with different employment patterns? How are the factors affecting child care use in families with non-employed mothers different from those in families with employed mothers?
- What is the impact of clustering ECEC services with other child/family programs or organizations? In what ways are there additional resources or efficiencies? If there are, how are they deployed to influence quality? Are there benefits to families of organizing services this way?
- Are there important benefits to be achieved from linkages or integration among ECEC between, for example, child care centres, family child care, early intervention programs, programs for children with special needs, kindergartens, nursery/preschool centres, parent support programs, etc.?

A comprehensive program of research could ensure that there are adequate supports and facilities to pursue analysis of these questions. The compilation of the basic data that has been discussed earlier in this chapter would provide Canadian researchers with a new ability to study questions like these, and others.

MOVING FROM HERE TO THERE: HOW TO BEGIN A CANADIAN ECEC DATA PROCESS

This chapter has discussed why it would be desirable to construct a set of ECEC indicators and the kinds of basic data that would be required in order to do this. The basic data would be drawn from existing and modified existing sources and several new sources that are described. In addition, a rationale for a long-term, stable ECEC research agenda is presented. Finally, the following section presents four ideas drawn from other jurisdictions and from Canada for how this work could begin.

In the United States, a process pertinent to Canada's consideration of ECEC data began in 1994. In 1994, a conference sponsored by the federal government and the University of Wisconsin brought together social scientists from a wide range of disciplines. Focusing on indicators of children's well being, work originating with the conference has contributed to activities that have improved the measurement of children's well being by federal agencies and others. These include: the Federal Interagency Forum on Child and Family Statistics (required by statute to present an annual report to the U.S. President on the situation of children), an annual government publication called *Trends in the Well Being of America's Children and Youth* (report on the condition of children) and the Family and Child Well Being Network of the National Institute of Child Health and Human Development (NICHD) (Prosser, 1997). This multi-pronged effort at initiating a national approach to data, indicators and research with the involvement of government, social scientists and NGOs can provide some useful ideas for Canada.

An interesting model that has been developed in relation to health in Canada is pertinent to ECEC data. The Canadian Institute for Health Information (CIHI) is an independent, not-for-profit organization with government and non-government members on its board of directors.

CIHI's core functions are:

- Identifying health information needs and priorities;
- Collecting, processing and maintaining data for a comprehensive and growing number of health databases and registries, covering health human resources, health services and health expenditures;
- Setting national standards for financial, statistical and clinical data as well as standards for health informatics/telematics; and
- Producing and disseminating value-added analysis.

In May 1999, CIHI, in cooperation with the Federal/Provincial/Territorial Advisory Committees on Population Health and Health Services, Health Canada and Statistics Canada, convened the first *National Consensus Conference on Population Health Indicators*. Participants were consulted on the selection of an initial core set of indicators that could be compiled from current data sources and the identification of indicators to be considered for future development. Subsequently, the compilation, verification and reporting of comparative data are now beginning for the indicators identified at the Consensus Conference. Over time, these indicators will be refined and expanded. It is anticipated that the scope and utility of the core set of indicators will also increase as new data are developed, benchmarks established and knowledge grows.

A third effort with lessons for Canada is the OECD's work on common ECEC indicators. This work, in the early stages of development grows out of the Thematic Review described earlier and is informed by this landmark work as well as the OECD's international work on common indicators in a variety of areas including education. Contributions to the OECD's work on ECEC indicators have come from two groups at the OECD: the Thematic Review team under the Education and Training Division and the Indicators of Education Systems (INES) Technical Group under the Indicators and Analysis Division. International meetings that included Canada in 2002 have laid out next steps for joint planning to improve present ECEC data collection and analysis. The discussion has included consideration of current data capabilities, concepts and the possibility of internationally comparable data collection (OECD, 2002).

An initiative in the education field provides a fourth and promising possibility for Canadian ECEC data. Currently, each provincial government sends a representative to the Pan-Canadian Education Indicators Program (PCEIP) under the aegis of the Council of Ministers of Education of Canada (CMEC), a body that meets on a regular basis to identify educational data needs and recommend processes for data collection and harmonization. This has not included ECEC. However, a new national and more inclusive Canadian effort in the education field was proposed in the November 2002 federal Throne Speech. This committed the federal government to "work with Canadians, provinces, sector councils, labour organizations and learning institutions to create the skills and learning architecture that Canada needs," including "building our knowledge and reporting to Canadians about what is working and what is not" by developing a Canadian Learning Institute (Human Resources Development Canada, 2003). The proposed Institute's mandate will "encompass

information about learning at all stages of life" (beginning with early childhood). It will report regularly on Canada's progress in learning outcomes, and publish and disseminate key findings. Initial consultation was conducted in the winter of 2002-2003.

It should be noted that analysis of efforts to establish national or international approaches to data, indicators and research usually reveals a government agency or an organizational body with research and policy expertise that plays a central organizing role. This kind of body—with appropriate representation from different levels of government, ECEC experts and other interested constituencies—would be positioned to set an agenda for the organization of Canadian ECEC data.

SECTION III

An overview of ECEC data: Canada and other countries

In the course of its work, this project reviewed approaches to ECEC data in Canada and elsewhere. These sources included both one-time-only efforts and continuing regular data collection exercises. This chapter includes an overview of pertinent Canadian ECEC data sources current and past with selected sources available in other countries for the sake of comparison (see Appendix I for information about locating data sources).

CATEGORIZING APPROACHES TO ECEC DATA

In assessing approaches to ECEC data across topics and jurisdictions, a broad categorization according to the main subject matter that a data source addresses is useful. The breakdown employed in this section includes:

1. **Demand for/use of/expenditures** on ECEC services and programs. Data collected from parents;
2. **Characteristics of services/clientele/workers/curricula.** Data collected from facilities/staff;
3. **Child/family/parent outcomes** associated with ECEC services. Data collected from families and children;
4. **Regulatory/program/administrative data** on finances, programs, basic characteristics of services and clientele. Data collected as part of administration of services;
5. **Supplementary and associated data.** Demographic data like child population, women's labour force participation, mother's incomes, etc. Data collected through sources such as official statistics.

1. DATA ON DEMAND/USE/EXPENDITURES ON ECEC SERVICES AND PROGRAMS

Data on the demand for, the use of, and the expenditures on ECEC services can be used to answer a number of important questions. For instance: What are the current use patterns of the various ECEC services available to young children? How many hours a day/days a week/weeks a year of different services do different children use? Do children use multiple types of care in a day, in a week, in a year, over their first few preschool years? What factors affect the patterns of multiple use of types of care? Are low-income families making different child care and early education decisions than middle-income families? Do single-parent families make different choices than two-parent families? How much do different types of families typically spend on child care and early education? What percentage of family income/mother's income do those expenditures make up? What factors have the biggest impact on a family's child care spending? What factors influence a parent's decision to stay home to look after children while they are young? How have patterns of labour force participation and hours of work of parents changed over the last five years/ten years? What is the relative contribution of a number of key factors like price, incomes, quality of service, age of children, family composition to the demand (willingness to purchase) early education and child care services for children? What influence do government programs (subsidies, grants, tax relief) have on parental decisions about work, and about the kind and quality of education and care that their children will have?

CANADIAN DATA SOURCES

Canadian National Child Care Survey (CNCCS)
A consortium of university researchers and Statistics Canada
Funded by Child Care Initiatives Fund, Health and Welfare Canada, provincial governments and other sources
(One-time-only. Data collected in 1988)

Now more than a decade old, this survey was Canada's most comprehensive parent survey about demand and use patterns of ECEC services for children 0-12. Parents in and out of the labour force were included although the main definition of child care used was tied to participation in the labour force, training or education. It included very detailed data on aspects of parent's labour force status, actual hours of work, use of maternity/parental or extended child care leave, spouse's labour force activity, child's disability, school attendance, type of child care, kindergarten, nursery school or before- or after-school program, care by relative or non-relative, care by spouse while working, care in own home by sibling, self-care, price of care, expenditures, hours of care. It also obtained data on preferred child care arrangements, factors creating tensions for parents in juggling work and family responsibilities, evaluation of past care arrangements, effects of concerns about child care arrangements, as well as neighbourhood support and a wide range of demographic information. The survey did not collect information about current hourly wages of parents (important in assessing parents' work decisions) or about actual quality of care, or about centre or other child care arrangement characteristics).

This was a large sample (about 22,000) permitting detailed analysis of the large data set. Data were collected by Statistics Canada as a supplement to the Labour Force Survey. A number of Statistics Canada publications presenting analyses of the data set on a range of topics were published and several studies by independent researchers were carried out as well using the data set.

Initial Results from the 1981 Survey of Child Care Arrangements
Labour Force Survey Research Paper Number 31
Statistics Canada (1982)
(Microdata documentation and users' guide available)

Statistics Canada was responsible for this one-time-only one-page survey of parents' child care arrangements as a supplement to the Labour Force Survey in 1981. The one page survey was designed with community consultation and executed, analyzed and published by Statistics Canada, Special Surveys Division.

National Longitudinal Study of Children and Youth (NLSCY)
Statistics Canada and Applied Research Branch, HRDC
(Continuing survey; every two years from 1994)

This longitudinal study includes 22,831 children age 0-11 and their parents. Begun in 1994, the NLSCY allows researchers to track changes in the same children over time. This is the most comprehensive data currently collected on children and the services they use as well as family characteristics, child health and development, behaviour, relationships, education, literacy, leisure activities, family functioning and parenting and family custody history. It includes a variety of child outcome measures.

Although this survey is generally useful for examining child and parental outcomes (see below), it is much less useful for examining issues related to the demand for, use of and expenditures on ECEC services. There is no information collected on the price or actual quality of ECEC services and detailed data on use patterns are collected only for parents who are in employment or studying. Sample sizes are not large enough to carry out analyses that assign children to different categories of ECEC arrangements (for example, child care centre, etc.) Further, because the sample "grows up", later cycles of data collection may have no information on young children. On the other hand, the longitudinal character of the data set allows for an assessment of changes in child care arrangements over time. Statistics Canada conducts a new cycle every 2 years with some changes in data collected and special add-on surveys.

DATA SOURCES FROM OTHER COUNTRIES

UNITED STATES

Survey of Income and Program Participation (SIPP)
U.S. Census Bureau
(Continuing)

SIPP is a major source of information on the demographic and economic circumstances of U.S. individuals and families and is therefore particularly useful for studying the use and effects of government transfer and service programs. SIPP gathers detailed data on earned, unearned and asset income and it measures monthly variations in contributing factors such as household structure, the determinants of program eligibility and actual program participation. It is a continuous survey with overlapping panels. A topical model on child care arrangements is added and studied intensively from time to time. This special topical module allows policy makers to investigate the dynamics of social change and the effectiveness of public policies and programs designed to address the child care needs of working parents.

National Child Care Survey (Complemented by *Profile of Child Care Settings*—see below)
Washington, D.C.: Urban Institute
(One-time-only, 1991)

Intensive one-time-only cross-sectional survey of about 5500 parents and their use of ECEC services and programs including family child care. It is complemented by the *Profile of Child Care Settings Study* sponsored by the National Centre for Education Statistics, U.S. Department of Education which surveyed directors of child care centres, preschools and licensed family child care providers. This complementary study provides information about the prices, convenience, and other characteristics of services from which parents made their choices.

AUSTRALIA

Child Care Survey
Australian Bureau of Statistics
(Every three years)

The Australian Bureau of Statistics has conducted a survey of child care users every three years since 1996. Although this comprehensive survey's use is not restricted to data collection on demand/use/expenditures on services and programs, it provides information on the supply of and demand for child care for children under 12 years. Information is also available on the cost of care, family characteristics, type and usage of child care, reasons for using child care, number and age of children, days and hours of care, labour force status and birthplace of parents, demand for child care, sick care arrangements, employer assistance for child care and other demographic and economic attributes of the families, children or parents, the receipt of the Childcare Cash Rebate and working arrangements of parents with children under 12. Data from this survey can be used to monitor changes in the way families balance work and family responsibilities and their child care use patterns.

2. DATA ON CHARACTERISTICS OF PROGRAMS/WORKERS (TEACHERS)

Data on the characteristics of different types of ECEC programs and of workers or teachers are collected in order to answer a number of important questions. For instance: what is the available supply of spaces of different types of care and education for children of different ages in different regions, towns and cities? How much child-development-specific training do workers in different types of ECEC have (kindergartens, day care centres, nursery schools, family home care, head start)? Do workers in different facilities get regular on-the-job training or professional-development training? What are hourly wage levels in different facilities/different provinces/different auspices? How do these wage levels vary by job position, education level, and experience working with children, special talents or abilities? Do workers in these facilities get pension benefits, extended health benefits, adequate sick pay and vacation provisions, etc.? What are the rates of job turnover in different child care and education facilities; what effect do compensation and other factors have on turnover? What are the staff-child ratios, group sizes and other quality-related characteristics of different child care and education facilities? What prices are charged for different services? How do costs of service provision vary across providers? What is the quality of care and education (as measured by on-site observers, using recognized evaluation scales) provided in different facilities and different classrooms to children of different ages? What factors are most consistently associated with higher quality of care and education? With lower quality of care and education?

Caring for a Living
Canadian Child Care Federation and the Canadian Day Care Advocacy Association
Funded by Child Care Initiatives Fund, Health and Welfare Canada
(One-time-only, 1991-92)

Caring for a Living was a follow-up to a 1984 survey carried out as background to the (federal) Special Committee on Child Care (Karyo Communications, 1984). It collected data from nearly 2500 caregivers in full-day child care centres to determine wages and working conditions of caregivers and some details of costs and prices of facilities. Now a decade old, this was one of the first studies to provide Canada with any microdata about child care facilities and characteristics of staff.

You Bet I Care!
University of Guelph, University of British Columbia and University of Calgary
Funded by Child Care Visions, Human Resources Development Canada
(One-time-only, 1998-99)

PART ONE. Modeled on, and extending, the *Caring for A Living* survey, this survey sampled full-day child care centres to determine wages and working conditions of caregivers and some details of costs and fees. The sample included centres with preschool age children in all provinces and one territory.

PART TWO. These data were collected from a different sample of child care centres in six provinces and one territory using the same instruments as Part One plus a supplementary centre questionnaire, an interview with a teacher and the ECERS or the ITERS, (Harms, Clifford and Cryer, 1998; Harms, Cryer & Clifford, 1990) and the Caregiver Interaction Scale. There was also a supplementary observation scale used in rooms that included children with special needs.

PART THREE. This collected remuneration data and information on characteristics of providers of regulated family child care in the six provinces and one territory. It also administered the FDCRS (Harms & Clifford, 1989) and the Caregiver Interaction Scale in providers' homes.

Overall, *YBIC!* is an excellent example of a survey of some characteristics of ECEC facilities (primarily staff) as well as analysis of observed or process quality. There are, however, a series of limitations, based both on the scale of resources required to carry out a study of this size and that these basic data were collected solely at the initiative of interested researchers. First, the sample of centres in Part Two is not random but was chosen randomly in selected locales to maximize access to on-site observations of quality. This problem is frequently encountered in such studies (for example, the American *Cost, Quality and Child Outcomes Study*). Second, although *YBIC!* is the sole relatively recent source of data on child care fees, there is little information collected about child care costs (compare this, for instance, to the *Cost, Quality and Child Outcomes Study* in the U.S.) so that further cost analysis is not possible. Third, although the study includes both full-day centres and regulated family child care, it does not include nursery schools, kindergartens and other non-day child care facilities providing ECEC services. Fourth, although the sample is a large one, sample sizes in some cells are too small to allow some fine grained analyses. Finally, the key data produced by the *YBIC!* researchers are one-time-only.

Providing Home Child Care for a Living
Goss Gilroy Inc. Management Consultants
Commissioned in association with the Child Care Human Resources Sector Study
Funded by the Sector Studies Branch, Human Resources Development Canada
(One-time-only, 1998)

This was a national survey of regulated home child care providers. It provides a snapshot in 1998 of the characteristics, self-reported incomes and views of regulated family child care providers. No data are available from New Brunswick, Prince Edward Island, Nova Scotia or the Territories. Newfoundland did not operate regulated family child care at the time.

Survey of Unlicensed Child Care Providers

Canadian Child Care Federation

Funded by the Sector Studies Branch, Human Resources Development Canada

(One-time-only, 1998)

This was a national telephone survey of unregulated family child care providers. It identified who the providers are, what they bring to the services they provide, their incomes and working conditions, professional development, job satisfaction and experience and education levels of home child care providers working in the unregulated sector.

Unfortunately, the study may have had biases that may be substantial. Unlicensed providers are characteristically shy to provide any information about themselves to authorities, partly because many of them do not provide receipts and may not fully declare their income for tax and other purposes. The caregivers willing to respond to this phone survey may represent a self-selected sample that is quite different from the underlying population of unlicensed caregivers. It is relevant to note that Statistics Canada was unwilling to do this particular study (after running a pilot test survey) due to their concerns about data quality.

Survey of Institutions Providing Early Childhood Training Programs

Statistics Canada, Funded by Human Resources Development Canada

(One-time-only—Commissioned as part of the Child Care Human Resources Sector Study, 1997)

A survey of all institutions known to provide ECEC training in Canada. Includes characteristics of program, teaching staff and students.

National Graduate Survey

Statistics Canada and Human Resources Development Canada

(Occasional. Special runs on ECE graduates conducted for the Child Care Human Resources Sector Study, 1997)

This survey follows graduates from post-secondary institutions. It provides information about the employment and educational experiences of graduates of universities, community colleges and trade and vocational schools at two years after graduation. The survey can provide some information, therefore, about the experiences of early childhood education graduates. Special runs on graduates with qualifications in early childhood education were conducted for the Child Care Human Resources Sector Study in 1998. These did not include graduates from Quebec, Manitoba or the Yukon.

A Report of Process Evaluation Survey Results: Aboriginal Head Start Urban and Northern Communities

Kishk Anaquot Health Research

Funded by Health Canada

(One-time-only, 1999)

This survey provides data available on Aboriginal Head Start programs. It was designed to collect a variety of information concerning the process of establishing and operating 99 Head Start operations in Urban and Northern Aboriginal communities. Information is summarized under the following categories: background information; personnel, training and volunteers; project administration and coordination; program participants and their communities subdivided under the categories: children and their primary caregivers, participant challenges and community challenges looking at best practices and plans for the future under both of these; Aboriginal culture and language; education and school readiness; health promotion; nutrition; social support; parental involvement; program needs; and program finances. It provides detail about implementation procedures and issues in establishing these programs.

Status Report on Family Resource Programs Across Canada

Canadian Association of Family Resource Programs (FRP Canada)

First report funded by the Child Care Initiatives Fund, Health and Welfare Canada; Second funded by Social Development Partnerships, Human Resources Development Canada

(1994, 2002)

The first report includes data from a questionnaire sent to 1200 family resource programs in the Association's database and 60 key informant interviews. It includes both qualitative and quantitative data. It describes program providers, participants, funding information, activities, programs and services offered, as well as number of programs, number of children, child care providers and parents served and their characteristics.

The 2002 report is based on 960 surveys returned by the estimated 2000 family resource programs across Canada at that time. Three questionnaires were used: a National Directory Survey, a Staffing, Salary and Benefits Survey and an Information Technology Survey. It includes similar information to the first report. While it comments on changes and trends, it was not set up to provide comparative data over time using the 1994 survey.

DATA SOURCES IN OTHER COUNTRIES

UNITED STATES

Cost, Quality and Child Outcomes in Child Care Centres
Carried out by researchers at a number of universities including the University of Colorado
(One-time-only, 1995)

A well-designed one-time-only study of child care centre facilities with on-site observation of quality of care, as well as detailed parent interviews and child testing to determine child outcomes. Very detailed information on the costs of providing child care. Comprised of 400 child care centres and 800 preschool-aged children from a sub-sample of centres in four states (California, Colorado, Connecticut and North Carolina). It provided a model for the development of the Canadian study, *You Bet I Care!*

CROSS-NATIONAL

UNESCO/EUROSTAT (UOE) international education data collection
International Education Indicators Project (INES)
Centre for Educational Research and Innovation,
Organization for Economic Co-operation and Development
Years of Data Collection
Phase 1: 1988-1989
Phase 2: 1990-1991
Phase 3: 1992-1996

The purpose of the INES project was to develop a system of indicators for cross- national comparisons in education. INES has been developing, collecting, analyzing, and offering a preliminary interpretation of a set of key indicators for international comparisons; providing a forum for international cooperation and the exchange of information about methods and practices of developing and using educational indicators for national policymaking and managing education systems; and contributing to evaluation methodology and practice to develop more valid, reliable, and comprehensive indicators, and to gain a better understanding of their use in policymaking. In 2002, it was proposed that several of the participating countries work together on ECEC data including a new "Minus 00" level to include children under age 3.

Regular publication of the calculated indicator set as *Education at a Glance* (OECD, 2003) occurs. At the end of phase three it was anticipated that the indicators function would become part of the regular responsibilities of the Education Division of OECD.

Information Network on Education in Europe
Pre-primary education (2002)
Eurydice database collected by EUROSTAT
(On-going)

The Eurydice database was established by the EC (now the EU) in 1980 to promote exchange and production of reliable and comparable information on education systems in Europe. The database provides national information on the history of ECEC services, general objectives, legislative framework, and types of institutions as well as quantitative comparative data.

There are a number of Eurydice publications on ECEC including *Preschool Education: Current Thinking and Provision.* This presents an overview of the main research results, a description of ECEC institutions for children 2 years to compulsory school age, and information on attendance rates, teacher training, pupil/teacher ratios, timetables and the program of activities. It analyzes the effects of preschool attendance on the child's success at school and development, social integration and success in adult life.

3. DATA ON EFFECTS OF ECEC ON CHILD/FAMILY/PARENT OUTCOMES

Data on a wide range of child, family and parental outcomes are collected in order to answer a number of important questions. For instance: are there differences in behaviour, emotional stability, cognitive abilities, and school-readiness amongst children having different ECEC experiences? Does the amount of time spent in child care arrangements matter? Does family background, income level, and family structure matter? Does the curriculum in an ECEC centre matter? Are children who go to junior kindergarten better off as a result? Are the effects of preschool experiences on children long lasting or not? Do positive or negative experiences in early grades interact with/reinforce/offset positive or negative effects in preschool care and education? What effect does ECEC have on parents? Are income levels and family well-being enhanced as a result? Are there long-term positive or negative impacts on mothers' careers and labour force attachment? What is the independent effect of parents' work patterns on early child development? Can good quality ECEC offset negative impacts and reinforce positive impacts of parental work patterns?

CANADIAN DATA SOURCES

National Longitudinal Study of Children and Youth (NLSCY)
Statistics Canada and Applied Research Branch, Human Resources Development Canada
(Continuing survey; every two years from 1994)

This longitudinal study includes 22,831 children age 0-11 and their parents. Begun in 1994, the NLSCY allows researchers to track changes in the same children over time. This is the most comprehensive data currently collected on children and the services they use, as well as family characteristics, child health and development, behaviour, relationships, education, and a variety of child outcome measures. While it is based on a large sample, children added as cohorts grow up are not followed longitudinally. Nor is the sample size large enough to examine particular groups of interest, e.g., children in rural communities, single-parent families or immigrants.

Although this survey is useful for examining child and parental outcomes in a general sense, there is insufficient information (i.e., data on quality is not available) about characteristics of ECEC services to draw conclusions about the associations between these. Sample sizes are not large enough to carry out analyses that assign children to different categories of ECEC arrangements (for example, child care centre, etc.). On the other hand, the longitudinal character of the data set allows for an assessment of changes in child care arrangements over time. Statistics Canada conducts a new cycle every 2 years with some changes in data collected and special add-on surveys.

Understanding the Early Years
Human Resources Development Canada
(One-time-only, 2000-2001)

Understanding the Early Years combines a number of data collection instruments intended to produce statistics on whether children are "ready to learn" physically, emotionally, socially and cognitively at the time of school entry and to understand the support systems available in communities for children. The collection instruments include:

- *The NLSCY* (described above) which collects data on child and family outcomes, family functioning and environments.
- *The Early Development Instrument* was developed for this study. The EDI is a questionnaire for kindergarten teachers in selected communities to complete for all children in their classes. It assesses "readiness to learn" at school entry by asking kindergarten teachers questions about five different domains of early development: physical health and well-being, social competence, emotional maturity, language and cognitive development, communication skills and general knowledge.
- *Community Mapping* produces a series of detailed maps, using Geographic Information Systems and Science (GIS) in conjunction with census data, a neighbourhood observation survey assessing traffic patterns, street lighting, etc. and an inventory of local programs and services for families and young children. The community mapping provides information on the locations of a variety of programs and services available in relation to the physical and demographic characteristics of a community. It is intended that communities will use this information to help decide whether or not existing resources meet the needs of the families and children they have been designed to support.

Longitudinal Study of Children and Youth in Quebec (ÉLDEQ)
Santé Québec, l'institut de la statistique du Québec/University of Montreal
(One-time-only, 1998-2002)

This longitudinal study includes approximately 2000 Quebec families with at least one child from birth to age 5. It is intended to identify the factors influencing children's development as well as their psychosocial adaptation to their environment. It is also intended to lead to increased understanding and activities to reduce child abuse and neglect and target behaviour problems among young people. Some of the seventy themes include:

- Sociodemographic characteristics of the parents;
- Maternal health during pregnancy, type of delivery, maternal and child postnatal health;
- Parental lifestyle, and physical and mental health;
- Family functioning, parental social adjustment and the nature and quality of the parent/child interaction;
- Child temperament, motor and social development, behaviour, sleep pattern and nutrition.

The ÉLDEQ is an extension of the NLSCY. The Quebec and Canada-wide longitudinal studies are comparable and complementary as many of the instruments are identical but ÉLDEQ 1998-2002 uses additional questionnaires for mothers and fathers as well as direct assessments of children. Each wave of data collection is preceded by a pretest that permits researchers to fine-tune and develop instruments for the survey that follows 17 months later.

DATA SOURCES IN OTHER COUNTRIES

UNITED STATES

National Household Education Survey (NHES)
Early Childhood/School Readiness Component
U.S. Department of Education
National Centre for Education Statistics
(Ongoing)

The NHES is a data collection system of the National Centre for Education Statistics (NCES) conducted in 1991, 1993, 1995, 1996 and 1999. It will be conducted again in 2001, 2003, and every two years subsequently.

In 1991 and 1995, the topics included early childhood education. 11,000 families with 3-8 year olds were surveyed to collect data about school readiness and adjustment to school. Topics included in this survey were developmental characteristics of preschoolers, school-aged children's participation in before- and after-school programs, family support for and parental involvement in education, school safety and discipline, school adjustment and teacher feedback to parents for kindergarten children and primary students, centre-based program participation, early school experiences, home activities with family members, and health status.

In the 1995 NHES survey, special topic modules covered participation in a variety of non-parental care arrangements. The survey also covered participation in child care arrangements according to race/ethnicity, the percentage of children in relative care and the household characteristics of the families who used child care.

Early Childhood Longitudinal Study: Kindergarten Class of 1998-99
U.S. Department of Education,
National Centre for Education Statistics
(Continuing)

This is a national longitudinal study of kindergartners, their schools, classrooms, teachers and families. 23,000 children in 1300 kindergarten programs were followed from birth through first grade, including children from different racial/ethnic and socioeconomic backgrounds during 1998-99. It provides information about the use of ECEC services and programs and examined variations in children's cognitive skills and knowledge, social skills, physical health and well being, and approaches to learning across a set of socio-demographic characteristics of children and their families.

Study of Early Child Care
Researchers from multiple universities
National Institute of Child Health and Human Development (NICHD)
National Institutes of Health
(Continuing, began in 1991)

This longitudinal study is one of the most comprehensive large scale child care studies conducted to date. It has the capacity to determine how variations in child care are related to children's development. In 1991, a team of NICHD-supported researchers enrolled 1364 children (all born in the same week) in the study and have now followed most of them through the first seven years of their lives. Researchers are assessing children's development using multiple methods: trained observers, interviews, questionnaires and testing. Variables assessed include social, emotional, intellectual and language development, behaviour problems and adjustments as well as physical health. Study includes measures of the quality of care provided in different settings, including centre-based care, unregulated family child care as well as elements of parental care and family functioning. This allows links to be drawn between child care quality, parenting quality and child/family/parent outcomes.

The Child Development Supplement
Panel Study of Income Dynamics (PSID)
(One-time-only add-on; Continuing survey, 1997)

PSID is a longitudinal survey of a representative sample of U.S. individuals and their families. It has been ongoing since 1968 and the data are collected annually. In 1997, this well-established longitudinal survey of about 5000 families supplemented its core collection with data on parents and their 0-12 year old children with the Child Development Supplement. This Supplement collected information from teachers, caregivers and children to permit assessment of variations in the self-assessed quality of early childhood care experiences on children's current and later development.

The data collection includes reliable graded assessments of the cognitive, behavioural and health status of 3500 children; a comprehensive accounting of parental and caregiver time input to children; teacher-reported time use; and other-than-time use measures of other resources such as the home learning environment, teacher and administrator reports of school resources and decennial-census-based measurement of neighbourhood resources. Topics include income sources and amounts, employment, family composition changes, demographic events, housing and food expenditures, housework time and health status. The study links four basic types of outcomes to children's well-being and future success: school progress; academic achievement and cognitive ability; social and emotional well being; and emotional well being; and health.

The Children of the Cost, Quality and Child Outcomes Study Go to School
U.S. Department Of Education
National Centre for Education Statistics
(One-time-only, 1999)

This study is a follow-up to the *Cost, Quality and Child Outcomes in Child Care Centres* study discussed earlier under facilities/workers. This study follows the 800 preschool children first evaluated in 1993 through second grade to establish a link between cost and quality of earlier ECEC and school readiness. The study showed that young children receiving poor quality child care were less prepared for school and tended to have less success in the early phases of school than students who received high quality care in their preschool years.

National Longitudinal Survey of Youth (NLSY)
U.S. Department of Labor
(Ongoing, 1988)

This longitudinal study has followed four cohorts since 1966 and a new survey of children (NLSY) opened in 1986. A supplement to the NLSY, the Mother-Child Assessment includes detailed information on the health and development of the children of young mothers in the NLSY. These home assessments of children's social, emotional and cognitive development as well as information on child care arrangements and other parenting supports attempt to link specific child development outcomes to those factors. It surveys parents about child care usage, which can be associated with later experiences and achievements of children.

UNITED KINGKOM

T.F. Osborn and J.E. Milbank
(One-time only, data collected in 1970, published in 1987)

This longitudinal study is described as the first major evaluation of British preschool education. It is unique not only in the large number of children involved but because it evaluates the whole gamut of types of organized ECEC programs finding similar types of effects for nearly all. The comprehensiveness of the study reduces the probability that sample selection bias is a major factor.

The study sample included all children born in the UK in 1 week. Ultimately, about 8500 children remained in the final sample. The children were assessed at 5 and 10 old years using cognitive and educational tests and a variety of statistical techniques were employed. The main analysis takes the gross mean differences on various types of tests at 10 years of age for children with different child care backgrounds and tries to add as "intervening" variables whichever factors reduce the net differences the most. The study looks separately at the developmental effects of six or seven different categories of ECEC programs but has no information about the quality of programs.

FRANCE

Ministère de l'Education Nationale
(One-time-only, data originally collected in 1985)
Described in Richardson and Marx (1989) and Bergman (1999)

The study includes every child in one age cohort in France. It provides information on the rates of repetition of Grade 1 by children with different numbers of years of participation in ECEC programs (one, two or three) and controls for father's occupation (a proxy for social class). The study does not include children not attending ECEC programs at all (it is likely that in France that there are too few 3-5 year-old children with no ECEC experience to provide this comparison and, indeed, it would be likely to be an unusual group). Although the study was conducted on the whole population of children in the age cohort, biases are still possible; for example, the number of years of participation may be influenced by factors such as living in an urban area, being more likely to have an educated mother or a mother in the paid labour force, more likely to have a higher family income, less likely to be from a recent immigrant family.

OTHER RESEARCH ON ECEC AND CHILD AND FAMILY OUTCOMES

In addition to this selection of large scale data sources that have child and family outcomes as a focus, there is a very large and complex literature of studies that links ECEC and child and family outcomes. Most of these studies do not provide large microdata sets but generally use quasi-experimental design rather than random assignment. Descriptions of several key studies follow. For a more exhaustive review and in depth discussion of the research literature on the effects of ECEC on children and families, see Shonkoff & Phillips, 2001.

Carolina Abecedarian Project
Researchers at the University of North Carolina
Study began in 1972; many publications over the intervening years
(One-time-only)

The Abecedarian Project was a carefully controlled study in which 57 infants from very low-income, at-risk families were randomly assigned to a high quality child care setting and 54 were in a control group. The experimental group received full-time high quality centre-based child care from infancy through age 5. The experimental and control children were initially comparable with respect to scores on infant mental and motor tests. Follow-up cognitive and social assessments as well as tests of reading and math in primary school were carried out periodically throughout the preschool and school years. The investigators have now completed a young-adult follow-up assessment of study participants at age 21 when 104 of the original 111 infants (53 from the intervention group and 51 controls) were re-assessed. A long-term follow-up analysis was recently authored by Masse and Barnett at Rutgers University (2002).

SWEDEN

B.E. Andersson
Researcher at University of Goteberg, Sweden
Longitudinal study originally published in 1992; other publications in 1996)
(One-time-only)

This study followed a group of 128 Swedish children from their first year of life to at least age 13 when 89% of children remained in the study. Children could be classified according to age at first entry into centre-based and family child care. Teachers rated cognitive and socioemotional competence and hierarchical regression and path analyses were used in the statistical treatment of the data. It was possible to trace independent positive effects of age of entry into child care as far as age 13.

4. ADMINISTRATIVE/REGULATORY/PROGRAM DATA

In Canada, provinces and territories (who have jurisdictional responsibility for education and social services) have a considerable amount of administrative data about ECEC programs. These data constitute most of the knowledge about Canadian ECEC programs. American states have considerable administrative data as well and, although this project did not do a comprehensive analysis of European or Australian sources of administrative data, it is likely that these countries do too, although the sources may be national, not regional. These data are collected in the course of monitoring and licensing, funding and, in Canada, providing subsidies to some families to permit them to use regulated child care. In Canada, provincial governments may collect data on kindergarten provision too. In addition, there are some data about Canadian ECEC programs that are federally funded and managed such as Aboriginal Head Start and the Child Care Expense Deduction.

Typically, these data are not collected by survey and their primary purpose is not to provide reliable data about ECEC services and users for the purposes of developing indicators or doing other research. Nevertheless, these data can provide indispensable information about ECEC programs and about the characteristics of families using them. Administrative data are often the only ECEC data available for specific geographical areas, an important feature in Canada where the provision of these services is so uneven.

CANADIAN DATA SOURCES

Provincial/territorial data on Canadian early childhood care and education programs are covered in section IV.

A number of federal programs funds some ECEC programs either directly (for example, the Child Care Expense Deduction, maternity/parental leave benefits, the First Nations/Inuit Child Care Initiative and Aboriginal Head Start) or indirectly (the Canada Health and Social Transfer including the Early Childhood Development Initiative and the Multilateral Agreement on Early Learning and Care).

This section briefly reviews sources and compilations of Canadian national and federal data available on ECEC-related programs. The following chapter of this report (IV) reports on the provincial/territorial ECEC administrative data and the issues involved in using it to provide a cross-national picture.

Tax expenditures and evaluations
Tax Division, Department of Finance
(Annual since 1995)
A Revenue Canada publication called Income Statistics, commonly called the "Green Book" generally includes this information.

This source provides data on the number of claimants for the Child Care Expense Deduction and amount claimed by income, family type, age and sex. There is no information about type, quality, price or purpose of care and no information about those not claiming and why nor information about parents unable to claim the Child Care Expense Deduction because of the absence of child care receipts or those who don't claim for other reasons.

Employment Insurance Monitoring and Assessment Reports
Human Resources Development Canada
(Annual since 1997)

This report provides data on those receiving maternity and/or parental benefits—number of beneficiaries in a year (different from the number of births); number of claims that included some maternity/parental benefits and the number of initial claims allowed for maternity/paternal benefits. It does not contain information about those who do not receive benefits—how many parents are ineligible because of hours, uninsured employment such as self-employment, out of the labour force although this information can be obtained separately based on analyses of the Survey of Labour Income Dynamics (SLID).

Status of Day Care in Canada
Health and Welfare/Human Resources Development Canada
(1971–1998)

This annual survey of provinces/territories presented the number of regulated child care spaces and auspice collated from administrative data together with information from a special run of Statistics Canada data on number of children with mothers in the workforce. Comparability was compromised across different jurisdictions due to different definitions of services, definitions of capacity (enrolled or licensed), organization of programs around different age groupings, lack of information on actual ages of children, different definitions of types of programs, hours of service, different staff qualifications, and varying responsibilities for nursery schools, Aboriginal child care, and school-age care. The last few versions were compiled by the Childcare Resource and Research Unit, University of Toronto.

Early Childhood Education and Care in Canada
Childcare Resource and Research Unit, University of Toronto (authors of the version published in 2002 were Friendly, Beach and Turiano)
2002 version funded by Social Development Partnerships, HRDC; previous versions funded by Child Care Visions and the Child Care Initiatives Fund

(Occasional, 1992, 1995, 1998, 2001)
Previous versions were titled *Child Care in Canada: Provinces and Territories*

The information used in this compilation is collated from several kinds of sources: a survey of provincial/territorial child care officials regarding administrative data and government policies, child care organizations, data on kindergartens collected (in the 2002 version) from a survey of provincial/territorial kindergarten officials, other administrative data including birth, maternity and parental leave figures, and demographic information from Statistics Canada on women and work, children and labour force participation.

The report contains detailed material about ECEC in Canada including funding and finances; regulations; number of spaces; parental leave policies; service monitoring and enforcement; history and recent developments. Data about ECEC services other than regulated child care is more limited and, indeed, was not included at all in earlier versions. A section presents cross-Canada compilations of the material topic by topic and the versions published in 2000 and 2002 present longitudinal compilations topic by topic over the decade of the 1990s. Using the same collection techniques and same definitions as much as possible, *ECEC in Canada: Provinces and Territories* has now been assembled for four collection times throughout the 1990s. It is the only comprehensive collection of ECEC data in Canada.

DATA SOURCES IN OTHER COUNTRIES

UNITED STATES

Although there are limited cross-state efforts at organizing ECEC data, usually done by NGOs such as the Children's Defense Fund (which maps service provision), there does not appear to be a publicly organized system of coherent cross-state administrative data in the United States. Thus, with the exception of Head Start, the sole national ECEC program (see below), American administrative data on ECEC seems to be as incomplete and fragmented as Canada's.

Head Start
Administration for Children, Youth and Families (ACYF)
(Annual)

There is excellent administrative/program data on the sole American national ECEC program, Head Start, a program for low-income children initiated in the 1960s that has a significant early childhood education component. Data is collected on every Head Start program as well as on every child and family using it.

Details on program characteristics, costs, characteristics of children enrolled, type of sponsoring agency, geographic region, and projections of costs and enrollment are collected by Head Start and compiled in a variety of ways. It is useful for program planning and evaluation purposes. Head Start also produces annual fact sheets. For example, *Facts on Head Start Budgets* reports the enrollment of children, their ages, race/ethnicity, state allocations, enrollment and appropriation history.

Thematic Review of Early Childhood Education and Care
Organization for Economic Co-operation and Development (OECD)
(One-time-only, 1998-2001 and continuing)

This international study of ECEC in member countries (Australia, Belgium, the Czech Republic, Denmark, Finland, Italy, the Netherlands, Norway, Portugal, Sweden, the U.K. and the U.S. were covered in the first round, and Canada, France, Germany, Hungary, Ireland, Korea, Mexico and Spain are included in round two) is the most comprehensive policy study ever undertaken in this area. Using a common framework, scope and process of the review, and identification of the major policy issues, the Thematic Review and its summary report *Starting Strong* provides cross-national information that can improve policy making and planning in ECEC in all OECD countries.

The Thematic Review is intended to: investigate the ECEC contexts, major policy concerns, and policy responses to address these concerns in participating countries; explore the roles of national government, decentralized authorities,

NGOs and other social partners, and the institutional resources devoted to planning and implementation at each level; identify feasible policy options suited to different contexts; evaluate the impact, coherence and effectiveness of different approaches and highlight particularly innovative policies and practices. It also includes consideration of issues of access, quality and equity as well as regulations, pedagogy and financing. Each country provides a Background Report with a detailed overview of ECEC. Following this, the OECD organizes an on-site review of each country and prepares a Country Note report prepared by the visiting team of experts.

Among other things, the Thematic Review is intended to contribute to the OECD's Indicators of Education Systems (INES) project by identifying the types of data and instruments to be developed in support of ECEC information collection, policy-making, research, monitoring and evaluation.

5. SOURCES OF SUPPLEMENTARY AND ASSOCIATED DATA

A number of sources provide either fragmentary information about ECEC or related information about families and children (but not about ECEC) which may be useful for analyzing demand, need and use patterns. Combined with other information or in a modified form, such sources could provide essential insights about ECEC. This section provides a list of such potential data sources.

CANADIAN DATA SOURCES

Census
Statistics Canada
(Every 5 years)

Information on the number of children (population count by age) and the employment status and other characteristics of their parents is produced every five years (2001, 2006, etc.). This information comes from a very large sample (either a 100% sample every ten years or a 20% sample every five years of the entire population) and therefore can provide extremely accurate population counts for detailed geographical areas within Canada. There is, however, no data on ECEC or child care arrangements.

Labour Force Survey
Statistics Canada
(Monthly)

This is the best data source for information on the labour force status and hours of work of parents. The survey covers about 60,000 households and collects information on labour force characteristics of Canadians including mothers by age of youngest child, leaves from employment, etc. While the labour force status of parents is collected on these surveys, there is insufficient information about the actual hours worked, including shiftwork to gain an understanding about how and how much child care is required. In 1981, a short survey of child care arrangements was conducted as a supplement to the Labour Force Survey; topics covered included use patterns for youngest child, child and family characteristics, family income, type of child care arrangement and cost of service, and reasons for child care use.

Survey of Labour and Income Dynamics (SLID)
Statistics Canada
(Continuing)

This is a panel survey of employment experiences and incomes of families and individuals. There is no information about ECEC but there is data about entry/exit from maternity/parental leaves and about parental employment patterns. The SLID is good for evaluating changes over time in parental work patterns as children age.

Survey of Household Spending (SHS)
Statistics Canada
(Annual)

This replaced the Family Expenditure Survey, commonly known as FAMEX. It collects information using a household survey about all household expenditures, including expenditures on child care, together with data on household labour force characteristics, income and other expenditures. There is currently very little detail on type of ECEC program used or for what purpose and there is no information about hours or quality characteristics of care.

Canadian Community Health Survey (CCHS)
Canadian Institute for Health Information
(2000-2001)

This survey is designed to provide reliable cross-sectional estimates of health determinants, health status and health system utilization for 132 health regions across Canada. Each two-year collection cycle will be comprised of two distinct surveys: a health region-level survey in the first year with a total sample of 130,000 and a provincial-level survey in the second year with a total sample of 30,000. The target population of the CCHS includes household residents in all provinces and territories with the principal exclusion of populations on Indian Reserves, Canadian Forces Bases, and some remote areas. There will be one randomly selected respondent per household, although planned oversampling of youths will result in a second member of certain households being interviewed. For the first collection cycle, only those 12 years of age and over are eligible for selection although it is expected that in future cycles child-specific content will be included. Consideration could be given to using this survey as a basis for an ECEC parent survey.

DATA SOURCES IN OTHER COUNTRIES

UNITED STATES

Decennial Census
U.S. Census Bureau

Similar to the Canadian census, it provides the largest sample and most complete information on general characteristics of the U.S. population. In addition to identifying patterns of change in household and family composition, racial and ethnic composition, age composition, geographic distribution, employment and personal income, it is invaluable for tracing trends and making estimates at the state and local levels.

Unlike the Canadian census, the questionnaire covers child care arrangements. However, as it only asks about the youngest child under age six in a household, it provides only a limited view of parents' use of multiple arrangements. In addition, data about the type of child care arrangement, the costs and hours of care are not provided.

Current Population: Classified Index of Industries and Occupations Survey
U.S. Census Bureau
(Monthly with occasional collection of ECEC information)

This survey is similar in structure to the Canadian Labour Force Survey. Through the regular addition of supplemental questions to the Current Population Survey (CPS), this survey provides annual and one-time information on a broad spectrum of subjects such as family and personal income, poverty, receipt of non-cash transfers, annual work experience, school enrollment and migration. Child care use and attitudes about work and child care have been included in the past but are not regularly collected.

General Accounting Office
U.S. federal government
(Various and occasional)

The General Accounting Office conducts studies of various elements of child care from time to time on request, for example, by Members of Congress. Recent examples of child care topics covered include: recent state policy changes affecting child care (2003), state quality improvement initiatives (2002) and public school involvement in early childhood programs (2000).

CROSS-NATIONAL

Indicators of Education Systems (INES)
Organization for Economic Co-operation and Development (OECD)
Published annually in *Education at a Glance*
Data set is available in CD and on-line format
(International, OECD member countries with a component for non-member countries
(On-going)

As mentioned earlier, these international education indicators are intended to provide comparable information about a rich array of data about education internationally to be used for policy making, evaluation and accountability. They provide information on what are widely agreed to be important features of the functioning, development and impact of education—from ECEC through elementary, secondary and tertiary education to learning and training throughout life. The indicators represent the consensus of professional thinking on how to measure the current state of education internationally. They provide information on the human and financial resources invested in education, on how education and learning systems operate and evolve, and on the human capital aspects of educational investments. It should be noted that the OECD's Thematic Review of ECEC across countries is intended to contribute indicators in the area of ECEC to this project.

Social Expenditure Database (SOCX)
Organization for Economic Co-operative and Development (OECD)
International, OECD member countries
(On-going)

The OECD Social Expenditure Database monitors trends in aggregate social expenditure as well as changes in its composition. It covers most OECD countries. It includes historical series for the 1980-1995/6 period on public and mandatory private social expenditure at program level classified under 13 social policy areas including family cash benefits and family services, labour market programs and unemployment. The SOCX database expenditure data such as expenditure and costs associated with raising children or with the support of other dependants. Expenditures are also collected for maternity and parental leave under the family cash benefits category.

Welfare in an International Perspective
Centre for Welfare State Research
Danish National Institute of Social Research
(On-going)

This provides access to information about social protection for some European and non-European countries. Contains data on the most important cash schemes in relation to birth and childhood such as maternity, paternity, parental and care leaves, and on the most common forms of ECEC services.

Social Security Worldwide (SSW)
International Social Security Association
United States Social Security Administration and International Labour Organization
(On-going)

This contains five different databases on social security including information on scheme description; description of

social security systems in over 170 countries; summaries of important reforms in social protection programs since 1995; references to social security legislation; references to books, periodicals and other material on social programs; and a thesaurus of key social security terms in English, French, Spanish and German. While there is no information on ECEC, it is useful for cash benefit scheme descriptions including family benefits and parental leave benefits.

Mutual Information System of Social Protection in the European Union
(MISSOC)
(On-going)

MISSOC is an information system created by the EU to provide brief, up-to-date and comparative information on social issues. It includes trends in social protection, comparative tables and information on new developments and recent events. The reports are compiled on the basis of national reports from EU Member States. It includes trends in social protection, comparative tables with information on the organization, financing, basic benefits, dependants, benefits in the event of employment injuries or occupational illnesses, family allowances and unemployment benefits), regulations on the guaranteed minimum level of resources, social protection for the self-employed; and also news and trends, and current information. It is easily accessible on the internet and contains much information.

In addition to survey and regulatory data collection, up-to-date information on the legislative, program and funding specifics of early childhood education and care programs in Canada are needed. The SSW, Eurydice and MISSOC provide useful examples of database systems that could be adapted to the ECEC sphere in Canada. Even though considerable work would need to be done to harmonize concepts and data collection procedures across provinces/territories for this program/administrative data to be comparable across provinces/territories, such a database would be an invaluable tool.

European Community Household Panel (ECHP)
Collected by EUROSTAT
(On-going)

The ECHP survey presents comparable micro-level (persons/households) data on income, living conditions, housing, health and work in the EU. This survey covers all the EU member states (Sweden is not included) in the same private households and persons. In 1995, over 60,000 households were surveyed. Data includes income from work, private income, income distribution, social exclusion, poverty, housing, health, medical care, education, retirement, unemployment and divorce. Contains useful background information on household composition and family structure data, the labour market situation in families with children and questions on the number of children in the household attending a child care centre or preschool by household income, labour market situation, provision by employers, etc.

European Survey on Working Conditions
European Foundation for Working and Living Conditions
(On-going)

This survey examines the labour market situation of European families providing information on provision of occupational benefits over and above statutory requirements such as the provision of sick leave, maternity leave, parental leave and child care benefits. Also includes questions on who holds main responsibility for household tasks.

SECTION IV

Administrative ECEC data currently collected by provinces/territories

The first part of this chapter provides information about and analysis of the administrative data collected by provinces and territories in the course of administering, monitoring and financing ECEC services. The second part of the chapter discusses how administrative data could be used to construct the indicators discussed in section II.

STRENGTHS AND WEAKNESSES OF USING ADMINISTRATIVE DATA AS BASIC DATA

As a data source, provincial/territorial administrative data—like all administrative data—has both strengths and weaknesses. It is usually not survey data based on a sample but often includes information on the entire population of interest (for example, all licensed centres or all regulated family child care homes or all child care staff receiving a wage grant). The data is collected by officials who are often quite knowledgeable about ECEC services in their jurisdiction; these officials may be able to help sort out puzzles in the data and explain anomalies that might otherwise go unexplained. There could be a wealth of data on topics that are too specialized for other types of data collection or which would require a very large sample—for instance, characteristics of families receiving subsidies, studies of characteristics of nursery schools, of centres providing services to disabled children, or centres providing services to Aboriginal children. Analysis of all these are likely to require the use of provincial/territorial administrative data at least in part.

The biggest drawbacks to the use of provincial/territorial administrative ECEC data as basic data are (a) gaining access to the data (there may be issues of confidentiality or data is not in an accessible form for use as data) and (b) issues of comparability across provinces/territories.

SURVEYING PROVINCIAL/TERRITORIAL DATA PRACTICES

This project surveyed existing ECEC data in all provinces and territories. The information obtained from child care officials is summarized in Table 2. As the table indicates, although provinces/territories produce a considerable amount of ECEC data for their own purposes (monitoring, accountability, financing, etc.) the data are not necessarily readily usable as data for other purposes nor are they comparable across jurisdictions.

It should be noted that this discussion focuses on data about ECEC only for preschool aged children. We have used a definition of data to mean that which is regularly, consistently and formally reported to provincial/territorial government officials; the information is then entered or transmitted into an electronic database. We have excluded (but noted) information that is collected anecdotally, by survey or kept in paper files. The project also conducted a telephone survey of education officials with responsibility for kindergarten to obtain information about how kindergarten data is regularly collected by the public education system. This information is contained in Table 3. As the notes to Tables 2 and 3 indicate, there are many differences in data collection methods between provinces/territories.

With the exception of Newfoundland, provinces/territories do not collect systematic data on family resource centres. Survey results from the 1994 and 2003 family resource centre surveys conducted by the Association of Family Resource Programs (FRP Canada) were also reviewed.

CURRENT DATA ON REGULATED CHILD CARE COLLECTED BY PROVINCES/TERRITORIES

The key points in Table 2 can be summarized as follows (note that these points refer to centres, regulated family child care and nursery school/preschools in jurisdictions where they are regulated):

- Spaces in centres are recorded according to age groupings in all jurisdictions so provinces/territories are able to provide data on "capacity" (i.e., the number of spaces available in centres) broken down into the age categories shown. Note that the age groupings of children are defined differently in different provinces and territories. For example, infants are from 0-23 months in Newfoundland, less than 12 months in P.E.I., and 0-17 months in Nova Scotia. Other provinces/territories have other definitions as shown.
- Many provinces/territories are not able to provide actual child enrollment figures for child care spaces. This means that they may know how many spaces are available but not how many children currently occupy them. This presents difficulties in accurately determining the number of children using centres or nursery schools because two or more children may occupy one space or a space may be vacant. However, most jurisdictions are able to provide enrollment data concerning children receiving fee subsidies.
- Most provinces/territories are not able to provide information on the actual ages (i.e., year of age or birth) of children in child care.
- However, all provinces/territories are able to provide more detailed age information on subsidized children although not necessarily by centre or nursery school.
- Provinces collect enrollment figures by age **range** of children. These age ranges are typically the same as those used to collect information about "capacity" but not always, as shown in Table 2.
- Most jurisdictions have information about the hours of service provided by the centre-based programs they license but the detail collected varies from one jurisdiction to another.
- Most provinces/territories do not collect data on wages and benefits of workers in centre-based programs.
- Most provinces/territories collect fee information, sometimes stated on an hourly basis, sometimes for full-time and part-time care.
- Many of the same data collection practices apply to regulated family child care as they do to centre-based care (note that Newfoundland did not collect information on regulated family child care at the time of the survey and therefore the following statements do not apply to Newfoundland). All provinces have data on the total capacity (i.e., spaces) available in regulated family child care. Generally, data on the actual ages of children in regulated family child care are not available but most provinces/territories collect data about the age ranges of children in order to ensure compliance with legislation. All provinces/territories have information on the number of subsidized children enrolled in family child care. The actual ages of children enrolled in family child care (month and year) are only available in Alberta (and by survey approximation in Nunavut).
- Most jurisdictions (with Ontario and B.C. as exceptions) have information about the hours of service provided by the regulated family child care homes they regulate but the detail collected varies from one jurisdiction to another.
- Almost no provinces have information about provider compensation in regulated family child care.
- About half have information about family child care providers' qualifications.
- Most have information about the price of a subsidized child care space provided in regulated family child care homes. This is sometimes stated on an hourly basis, sometimes for full-time and part-time care, etc.
- None of the jurisdictions has data on informal, unregulated child care arrangements.
- Most provinces have some information about on-reserve child care programs (the number of programs) although some regulate them and some do not. Some have information about Aboriginal Head Start programs.

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TABLE 2 **Child care data currently collected, Fall 2000**

Data collected	NF	PE	NS	NB	QC	ON[1]	MB	SK	AB	BC	NT	YT	NUN[1]
						IN MONTHS (WHERE APPLICABLE)							
Centre-based child care (collected for each facility)													
Geographic region	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Auspice	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Conditional licences	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes	Yes	N/A	Yes	N/A
No. of inspectors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Capacity by age group	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Age groupings for capacity data are available (months)	0-23 24-35 36-83 84-144	< 12 12-23 24-35 36-59 60-71 72-83 >84	0-17 18-35 36-71 72-144	< 24 24-35 36-47 48-59 60-71 72-144	0-17[1] 18-35 36-60 60+	0-18 18-23 24-59 60-71 72-120	3-24 25-71 72-144	0-17 18-29 30-60 Kind[1] 72-144[2]	0-12 13-18 19-35 36-71	0-36 37-59 60-144	0-24 24-60 61-144	0-18 19-36 37-School age[1] 1-144[2]	3-24 25-36 37-60 School age not licensed
Capacity—nursery schools	Yes[1]	No[1]	Yes	No[1]	Do not license	Yes	Yes	Do not license	Yes	Yes	Yes	Do not license	No
Enrollment—all children	No	Yes	Yes	No[2]	No	No	No	Yes	Yes	No	No	Yes	No
Enrollment—subsidized children	Yes	Yes	Yes	Yes	Yes[2]	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Enrollment—nursery school	No	No	No	No	N/A	No	No[1]	N/A	No	No	No	N/A	No
Enrollment—special needs children	No	Yes	No	Yes	Yes	No	Yes	Yes	No	No	No	Yes	Yes

Data collected	NF	PE	NS	NB	QC	ON[1]	MB	SK	AB	BC	NT	YT	NUN[1]
						IN MONTHS (WHERE APPLICABLE)							
Centre-based child care (collected for each facility)													
Enrollment–individual ages–all	No	No	No	No	Yes	No	No	No	Yes	No	No	No	No
Enrollment–individual ages –subsidized children	Yes[2]	Yes	Yes	Yes	Yes[2]	Yes	Yes[2]	Yes	Yes	Yes	Yes	Yes	Yes
Age ranges–enrolled children: (months)	0-23 24-35 35-83 84-144	< 12 12-23 24-35 36-59 60-71 72-83 >84	0-17 18-35 36-71 72-144	No[2]	No[1]	No	3-24 25-71 72-144	0-17 18-29 30-60 Kind 72-144	0-12 13-18 19-35 36-71	No	No	0-18 19-36 37- School age 61-144	No
Duration of service–enrolled children (full-time, part-time	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes
Staff qualifications[2]	Yes	Yes	Yes	Yes	Yes	N/A[1]	No[3]	Yes	Yes	Yes	Yes	Yes	3-24 25-36 37-60 School-age not licensed
Staff wages/benefits	No	No	No	No	Yes	N/A	Yes	Yes[3]	No	Yes	No	Yes	No
Fees (see text for more specific details)	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes	No

Data collected	NF	PE	NS	NB	QC	ON[1]	MB	SK	AB	BC	NT	YT	NUN[1]
						IN MONTHS (WHERE APPLICABLE)							
Regulated family child care (collected for each agency or home)													
Capacity: Total only	N/A[3]	Yes	Yes	Yes	Yes	Yes[2]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age groupings for capacity data (where applicable)	N/A	No	No	No	No[3]	No	3-24 25-71 72-144	No[4]	0-12 13-18 19-35 36-71	No[1]	0-24 24-60 61-144	0-18 19-36 37-school age 61-144	No
Enrollment–all children	N/A	Yes	No	No[2]	No[3]	No	No	Yes	Yes	No	No	Yes	Yes
Enrollment–subsidized children	N/A	Yes	Yes	Yes	No[2]	Yes	Yes	Yes	Y es	Yes	Yes	Yes	No
Enrollment–special needs children	N/A	Yes	No	Yes	Yes	No	Yes	Yes	No	No	No	Yes	Yes
Actual ages–all children	N/A	No	No	No	No[3]	No	No	No	Yes	No	No	No	$30.00 per day
Actual ages–subsidized children	N/A	Yes	Yes	Yes	No[2]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Age ranges collected–enrolled children	N/A	No	No	No	0-17 18-35 30-60 60+3	No	3-24 25-71 72-144	0-17 18-29 30-60 Kinder 72-144	0-12 13-18 19-35 36-71	No	No	0-18 19-36 37-school-age 61-144	No
Duration of service (full-time, part-time)	N/A	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Provider–qualifications	N/A	Yes	No	Yes	No	N/A[3]	Yes	No	No	Yes	Yes	Yes	Yes**
Provider–earnings/benefits	N/A	No	No	No	No	N/A	No	Yes[3]	No	No	No	No	No
Fees (see text for more specific details)	N/A	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes

Data collected	NF	PE	NS	NB	QC	ON[1]	MB	SK	AB	BC	NT	YT	NUN[1]
	IN MONTHS (WHERE APPLICABLE)												
Government expenditure data													
Total expenditures	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Average expenditure per child	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Average subsidy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Operating, maintenance, wage grants, etc. (average spent per child)	Yes	Yes	No	No grants	Yes	No[4]	Yes[4]	Yes	Yes	Yes	Yes	Yes	
Special needs funding per child—centres	No	Yes	Yes	Yes	No[4]	N/A	Yes	Yes	No	Yes	No	Yes	Yes
Special needs funding per child—family child care	N/A	Yes	Yes	Yes	No[4]	No	Yes	Yes	No	Yes	No	Yes	Yes
Other													
Unregulated care arrangements	No	No	No	No	No	No	No	No	No	No	No	No	
Government funding for unregulated care	Yes	Yes	No	Yes	No	Yes	No	N/A	No	Yes	Yes	N/A	
Resource centres	Yes	No	No	No	No	No	No	No	No	No	No	No	
Enrollment in on-reserve programs	No	No	No	No[2]	Yes	No	No	No	Yes	No	N/A	N/A	N/A
Enrollment in Aboriginal Head Start programs	No	No	No	No	Yes	No	Yes[7]	No	Yes	No	No	Yes	No[2]

NA	Not applicable.
General[1]	References described here only include data systematically collected and recorded in the system. Does not include survey data or information kept in paper files.
General[2]	Only records whether province/territory records some systematically collected data on qualifications; does not differentiate between levels of staff or types of qualifications.
NF[1]	Nursery schools licensed as part-time group centre programs.
NF[2]	Subsidy information collected by regions; aggregate numbers then submitted to provincial office.
NF[3]	Family Home Day Care is new and data collection has not yet been commenced.
PE[1]	Nursery schools classified as Type 1 which covers early childhood centres, nursery schools or kindergartens; not recorded separately.
NB[1]	Only licensed on request or as a result of complaint.
NB[2]	Collected by survey in selected years; approximately 50% return rate.
NB[3]	Enrollment in on-reserve programs is only conducted on request and for these programs, information from survey data would be available.
QC[1]	Quebec data collection system in transition. Details recorded refer to information available as of Jan 2001.
QC[2]	No data on subsidized children at all after September, 2000.
QC[3]	Information collected at level of CEP; only aggregate data available to provincial office.
QC[4]	Per subsidized service (not by child).
ON[1]	Childcare Management Information System set up as a contract management system so that provincial department collects licensing information only. Municipalities now responsible for all other information and provincial office collects aggregate data only. If municipalities systematically collect the information, it has been included in this table.
ON[2]	Information collected by family home day care agencies; provincial office receives aggregate data only. No detailed age enrolment information, number of family homes only.
ON[3]	Information not known by those interviewed.
ON[4]	Operating grants can be calculated by licensed capacity only.
MB[1]	Only subsidized children in licensed programs.
MB[2]	Not currently produced in report form.
MB[3]	Staff classifications on system, qualifications kept in paper files.
MB[4]	Operating grants calculated by licensed space.
SK[1]	Definition of preschool: 30 mos not exceeding 6 years and does not attend school, but includes a child who attends kindergarten. Kindergarten attendance stats available.
SK[2]	School-age definition: A child who is of the age of 5 years or more and attends a school other than a kindergarten.
SK[3]	Wages/earnings only, not benefits.
SK[4]	Age groupings not specifically collected; province estimates numbers based on regulatory requirements.
BC[1]	Age groupings not specifically collected; province estimates numbers based on regulatory requirements.
YT[1]	Definition of preschool includes children from 37 months to the date of graduation to kindergarten; may not be a specific age.
YT2	School-age care is available to children with special needs until age 16.
NUN[1]	Nunavut is still in the process of setting up their regular data collection system. Started process by conducting a comprehensive survey of all facilities. Consquently, process may change as process develops.
NUN[2]	Actual ages of all children kept on attendance forms by date of birth but not submitted and stored on system.

DATA ON KINDERGARTEN CURRENTLY COLLECTED BY PROVINCIAL/TERRITORIAL EDUCATION AUTHORITIES

The key points about available kindergarten data in Table 3 can be summarized as follows:

- In almost all jurisdictions, kindergarten is for five-year-olds with the specific age at which a child is eligible for kindergarten varying somewhat. Ontario provides kindergarten for most four-year-olds while other provinces/territories provide limited kindergarten for this age group.
- Almost all provinces/territories have data on the number of children enrolled in kindergarten. None can provide enrollment data by age.
- Jurisdictions have no information on the characteristics of children in kindergarten.
- Most jurisdictions do not regularly collect and report information about total spending on kindergarten (separate from other elementary education). Some have data on the cost per child of providing kindergarten; however, these figures may not be comparable across jurisdictions in terms of what is included.
- Most jurisdictions do not have information about average class size nor teacher:child ratios. Most have no data on whether assistants are provided (if assistants are provided, it is likely to be a local decision). Perhaps because kindergarten is funded and managed under child care legislation, P.E.I. is an exception in all of these.
- In many provinces/territories, administration of schools and education is decentralized so data is not coordinated at a provincial level.
- Six jurisdictions out of 13 have data on the number of children in kindergarten who have special needs.

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TABLE 3 **Kindergarten data available, Fall 2000**

Issue	NF	PE	NS	NB	QC	ON	MB	SK	AB	BC	NT	YT	NUN
Eligibility age	Age 5 by Dec	Age 5 by Jan	Age 5 by Oct 1	Age 5 by Sept 1	JK: Age 4 by Dec 31; SK: Age 5 by Dec 31	JK: Age 4 by Dec 31; SK: Age 5 by Dec 31	Age 5 by Dec 31	Age 5 by Sept 1 or Dec 31	Age 5 by Sept 1	Age 5 by Dec 31	Age 5 by Dec 31	Age 5 by Dec 1	Age 5 by Dec 31
Number of children enrolled	Yes	Yes	Yes	No	Yes	Yes	Yes (est.)	Yes	Yes	Yes	Yes	Yes	Yes
Hours enrolled	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes
Personal info on children	No	No	No	No	No	No	Some	No	Yes	Yes	No	Yes	Yes
Program info (by program)	No	Yes	No	No	No	No	No	No	No	No	No	No	No
Total kindergarten spending	No	Yes	No	No	No	Yes	No	No	No	No	Yes	No	No
Cost per kindergarten child	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Average class size	No	Yes	No	Yes	Yes	No	No	No	No	No	No	No	No
Teacher/child ratios	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	Yes	No
Teacher/assistant ratios	No	Yes	No	No	No	No	No	No	No	No	No	Yes	No
Teacher qualifications	No	Yes	No	No	No	No	No	No	No	No	No	No	No

Issue	NF	PE	NS	NB	QC	ON	MB	SK	AB	BC	NT	YT	NUN
Personal information on teachers	No	Yes	No	Yes	N/A	No	Yes	Some	Some	No	No	Yes	No
Education asst.	No	No	No	Yes	No	No	Yes	No	No	No	No	Yes	No
Number of children with special needs	No	Yes	No	Yes	Yes	No	No	No	Yes	Yes	No	Yes	No

PE: Children attend 2.5 hours per day which can be in half-days or three full days. Samples of program curriculum, parent and staff policies are collected provincially. Dept. of Health knows how many children have been identified as needing special assistance. Kindergarten programs operated jointly with early childhood education; this means that children can attend for a full day, publicly funded for 2.5 hours and pay a fee for the balance of the day.

NS: Kindergarten is compulsory at age 5 and therefore Ministry does not make a lot of distinction between 5, 6 and 7 year olds; Halifax Board of Education runs a 4+ program in "areas of need". Ministry could derive estimate of total kindergarten spending and cost per child, but it is not actually calculated; they can more easily calculate the amounts spent by the Boards of Education. They do not collect comprehensive information on teacher qualifications but know that they have a certificate.

NB: Compulsory for children age 5 to attend school by September 1 of school year. They attend for the same hours as Grades 1 and 2: minimum 4; maximum 4.5 hours per day. The Ministry knows that classes with over 20 children get an assistant. They collect some personal information on teachers: name, address, age, gender for example. They do not collect kindergarten education assistant qualifications separately from other grades. There are no records kept on numbers of children with special needs. New Brunswick also collects information separately on resources allocated to kindergarten programs.

QC: System was undergoing change.

ON: Local school boards collect more information.

MB: Most kindergarten programs are half-day, although some are full day but not every day. It varies across school districts. The Ministry does collect some personal information on children: name, address, age, gender, date of birth, etc. Manitoba does not collect program information but does basic monitoring only. Total kindergarten spending could be calculated through the Financial Reporting document. Child care ratios are kept for all teacher certified personnel; this includes librarians, program coordinators, principals, etc. Personal information collected on teachers includes name, address, age, gender, years of service, birthdate, country of birth, citizenship, classifications between 1 and 7, education, degrees they hold, certificates, where they're employed and at what % they're employed.

SK: Age eligibility does vary by school division in Saskatchewan. Some school districts require that a child be 5 by Dec. 31; others Sep. 1. Hours of attendance is decided by school division, but most do half-day; Saskatchewan does collect some personal information on teachers with regard to their special education qualifications.

AB: Alberta Learning had recently re-introduced funding for half-day kindergarten programs up to 475 hours a year; public, separate school and private programs co-exist; School boards determine the age of entry although it is generally age 5 by September 1. School divisions set the age of school entry; children must be age 6 between September and the end of February and the kindergarten year is one year before that; this means that some children with a January 31st birthdate can start school earlier than children with a birthdate of February 28.

Funding available for 2 year olds with serious disabilities, 3 and 4 year olds with mild or moderate disabilities.

BC: BC funds children attending kindergarten 450 hours per year. Personal information collected on children includes name, gender, birthdate, school, language, program, special education program enrollment. The Ministry collects enrollment data on children with special needs by funded category only.

NT: The costs for kindergarten are $700,000 per year with an increase to $800,000 in 2001; they do not have a cost per child. The Northwest Territories runs half-day kindergarten programs with a ratio of 1:17 not including education assistants. The territorial government keeps track of teachers and their qualifications; all teachers must hold an NWT teaching certificate from the Department of Education.

YT: It is possible to collect total kindergarten spending and the cost per kindergarten child but generally the information is reported for elementary education as a whole. All schools and programs are funded through the Department of Education which in the Yukon acts as both the Ministry and the School Board.

NUN: Children are enrolled a minimum of 485 and a maximum of 570 hours per annum. Schools conduct pre-kindergarten screening which includes hearing test, eye test, Denver developmental test, other development assessments in workshops with parents and teachers, a kindergarten visit, etc. This information is only housed in the school and not passed on to the Department. Nunavut is planning to do more program monitoring in the future. Cost per kindergarten child can be estimated using 50% of the funding formula but this would not be precise. Estimates only exist for average class sizes. Teacher:child ratios are kept for the elementary system as a whole. Teachers required to have a teacher certifications or letters of authority permitting teachers with early childhood education certificate to teach. Personal information on teachers kept in school operations system only. Education assistant used only for a child or groups of children with special needs; they do not require them to have qualifications so this information is not collected.

WHAT FACTORS AFFECT COLLECTION OF ECEC ADMINISTRATIVE DATA?

Four issues are key to how administrative ECEC data is collected, organized and used are affected by elements of the context. (Note that much of the following discussion may be more relevant to provincial/territorial child care data than to other ECEC data).

- Purposes of data collection
- Technical capacity
- Legislative and policy requirements
- Broader corporate needs

PURPOSES OF DATA COLLECTION

In all the provinces and territories, the primary purposes for child care data collection were identified as:

- Licensing to comply with legislation
  (Records of complaints, inspections, serious injuries, child care worker certificates, etc.)
- Administering fee subsidies
  (Assessment/eligibility of parents; keeping attendance records from child care programs for subsidy purposes; making payments to centres, agencies and family day care providers)
- Administering funding programs (operating, maintenance, equipment, start-up, capital and wage grants, special needs, administration, etc.) The provinces/territories that administer wage enhancement and/or operating grants also may collect information about staff, such as wages and benefits, specific qualifications and training taken.

Although these purposes were identified as primary, the information collected for these purposes indirectly allows provinces/territories to use and/or adapt the information for other subsidiary purposes:

- Management reporting;
- Policy development, briefing;
- Media, researcher and public enquiries.

None of the provincial/territorial child care officials responded that their systems were fully capable of achieving their own goals for management of the province or territory's child care programs. Many of the officials indicated that they would like to have a system which went beyond the "enforcement functions" of the licensing system or the "financial administration functions" of the subsidy and grant systems. They said that they would like to be able to develop systems that enabled: effective program evaluation, customer satisfaction reporting, close monitoring of quality initiatives, assessment of child development outcomes, development of a profile of users, collection of information on program activities, language and cultural components; assessment of staff training and agency training needs; and of course have sufficient information to be able to develop effective funding criteria, etc. For all provincial/territorial officials, a basic goal would be to have information on all components of the system readily available, interconnected and easily analyzable.

TECHNICAL CAPACITY

A number of the provinces and territories indicated that they were in the process of revamping or improving their child care information systems. The scale of these activities covers a wide spectrum; some plans are quite ambitious, for example, Ontario's Data Warehouse project. There is considerable variation among provinces/territories in terms of system capacity. While investigation and evaluation of the technological capacity of individual provincial and territorial data collection systems is beyond the scope of this report, the extent to which technological capacity contributes to data collection capability should be highlighted.

The range includes provinces/territories using a highly developed integrated web-enabled, Windows-based PC/LAN systems, which enables them to cross-tabulate between a variety of service areas and between departments. It also permits the creation of on-line user sites so that child care programs can file and receive information directly. However, generally, provinces and territories are functioning with older systems that do not have the capacity to cross-tabulate information between different service areas. In most cases, for example, provinces/territories are not able to cross-tabulate information collected for licensing purposes with information collected for the financial administration of subsidies. Some provinces are further constrained by the fact that different service areas are housed in different ministries; consequently, control over the information is extremely limited. Almost all provinces and territories house their subsidy systems within a corporate mainframe site and have a variety of subsidiary systems to administer and track grants and licenses. These subsidiary systems range from basic Word tables and Excel spreadsheets to custom-made programs.

None of the provinces/territories are able to use common identifiers such as health insurance or social insurance numbers to cross-tabulate with parent or child information. It is clear, therefore, that attempts to harmonize data collection and organization methods would be affected by the limitations and range of technological capacity.

POLICY AND LEGISLATION

Child care data has historically been collected as a result of specific legislative and policy goals. For example, in some provinces/territories, child care programs tend to be viewed as independent private businesses (even if they are not-for-profit). Parent users may be viewed as private consumers and governments have tried to be as non-intrusive as possible. In provinces/territories where substantial universal grants (equipment, capital, operating, wage enhancement, etc.) are allocated, there is usually more enrollment information in order to provide accountability for the funding and to develop future budgets. There are distinct differences of approach concerning the rights of government to request detailed data on facilities and their clients.

Another example of policy approaches affecting data collection extends to programs for Aboriginal Canadians on reserve. Alberta and Quebec regulate and collect data on children enrolled in programs on reserves. Ontario and British Columbia license programs on reserve as part of their system but do not collect enrollment data. New Brunswick and Newfoundland license these on request. There are no reserves in the territories. Other provinces do not license, regulate or collect data.

Regionalization is another example of how policy has an impact on data collection. All provinces and territories have some form of regionalized administration of child care. The degree of regional autonomy has an impact on province and territories' ability to collect detailed information. For example, a result of downloading of funding and service administration to municipalities with global budgets in Ontario is that the provincial government is no longer collecting data on individual centres. It also means that municipalities develop their own policies with regard to data collection although the province still requires overall accountability in aggregate figures for spending.

The influences of policy and legislation lead to many differences in data collection and organization; the report does not intend to focus on the countless differences between the provinces/territories.

PROVINCIAL/TERRITORIAL CORPORATE NEEDS

A further determining factor influencing approaches to ECEC data is related to the larger corporate needs of the individual province or territory. Obviously, child care and education departments fit within the broader context of provincial/territorial government policy and direction. In legislative and policy issues, information technology, and sharing information, the greater needs of the whole corporation may be in conflict with the particular needs of ECEC. An example of this can be found in Newfoundland where child care data development was closely tied to the needs of the Strategic Social Plan for the development of overall social policy in Newfoundland.

USING PROVINCIAL/TERRITORIAL ADMINISTRATIVE DATA FOR PAN-CANADIAN ECEC INDICATORS

With fourteen different administrative units—ten provinces, three territories and the federal government—each having its own data collection practices and priorities as well as multiple departments and ministries, harmonizing ECEC data to provide comparable data across jurisdictions does not seem an easy task. Using the indicators described in section II, this section discusses some ideas that could move in this direction.

In chapter II, four areas of indicators were discussed and the kinds of data that would be necessary in order to produce them regularly were identified. Three of these would require some information that could be collected (or best collected) from provincial/territorial administrative data:

- **Indicators of availability:** Availability of ECEC services to children and families as percent of services needed; distribution of ECEC spaces; availability of spaces that can accommodate children with special needs;
- **Indicators of affordability:** Cost of child care as a percentage of family income; actual expenditure on ECEC services as percent of family income and mother's income; the extent to which families with low incomes are able to obtain subsidies;
- **Indicators of quality:** Teacher and director education in ECE; turnover of teachers; wages and working conditions; measures of process quality; quality perceptions of parents and professionals; resources available to support quality; improvements.

These kinds of indicators would serve the purpose of providing local, regional, provincial and cross-Canada comparisons of the level of availability, affordability and quality of ECEC services as benchmarks of progress. As indicated previously, provincial/territorial administrative data is not the exclusive source of data required to construct these indicators. In some cases, additional information from other sources is required. For example, to construct an indicator of availability, the information on the number of spaces would best be collected from provincial/territorial administrative data but some of the definitions of need (such as child population by labour force activity of parent or child population) would be best collected from the cross-Canada Labour Force Survey or Census.

In other cases, provincial/territorial administrative data may be an alternative (or preferable) data source but not the only one. For example, to construct an affordability indicator, information on fees (price of the service to parents) could be collected from provincial/territorial administrative data but it could also be collected by means of the regular parent survey with a national sample that this report recommends.

The text below discusses the problems that would be encountered in producing comparable data across provinces/territories for constructing these indicators.

ANNUAL RETURN PROCESS

The data required for constructing common indicators would be assisted if government departments were to use an agreed-upon, cross-Canada harmonized form for each centre, school, nursery school, kindergarten, and regulated child care home to collect data annually. This could be required of publicly operated ECEC services such as kindergarten or as a condition of child care licensing. To provide data from a common timeframe, annual reporting to provinces/territories and the federal government would occur at a common time of year.

INDICATORS OF AVAILABILITY

In order to construct an availability of space/seat indicator, we would need to know:

a) The number of spaces available in a variety of ECEC programs. This would include child care centres, family child care, nursery schools and kindergartens. This information would best be provided by provincial/territorial administrative data; and
b) The child population of a certain age, the number of children with parents working full time in the labour force (or the number of children with mothers working full or part time and the number of children of full-time students and trainees). This information could continue to be provided by Statistics Canada Labour Force Survey data as it was for the Status of Day Care in Canada.

To create the indicator the information on the number of spaces available, (a) would be juxtaposed against some criterion of need or demand, as in (b) above—the child population of a certain age. It should be noted that there would be a number of definitional issues to be worked out among the jurisdictions, for example, the definition of a "space".

INDICATORS OF AFFORDABILITY

There are at least two possible indicators of affordability of ECEC programs. The two discussed here are:

INDICATOR 1: PERCENT OF FAMILY (OR MOTHER'S INCOME) SPENT ON ECEC

The information on family or mother's income could be obtained from the Survey of Labour and Income Dynamics (SLID). The information required to establish spending on early childhood education and care services could be derived from two sources:
a) Cross-Canada parent survey or an improved Survey of Household Spending, or
b) Provincial/territorial administrative data.

Provincial/territorial administrative data would have to be collected in comparable fashion to be useful. The information on the price of defined services (e.g., monthly parent fees for a full-day child care space for a four-year old attending regular weekdays) would have to be collected from ECEC programs.

INDICATOR 2: PAYMENT BY PARENTS, GOVERNMENT, AND OTHER DONORS AS A PERCENT OF COST OF SERVICE

Assessing the payment for child care made by parents, government funding and donors as a percent of the average cost of ECEC programs provides another indicator of affordability. This would essentially be a financial analysis. Four pieces of information would be needed for this:
a) Average annual total cost of services per full-time space;
b) Average annual expenditure per full-time child by parents;
c) Annual value of payments by government per full-time space;
d) Annual value of donated services per full-time space.

(A) COST OF SERVICES

Information about cost of services would be most accurately obtained from the facility's annual financial statement. From a total expenditure figure, the cost per full-time (or part-time) space is an easy arithmetic calculation (with adjustments being made for the value of donated services).

Because kindergarten is free to parents, parents pay 0% of the cost but tracking the cost of producing kindergarten programs should occur for several reasons. In the case of children who attend both child care and kindergarten programs, this would provide a more complete picture of the affordability of services.

As mentioned earlier, provincial/territorial administrative data is not the only way that this information can be obtained.

It could also be obtained from a regular facility survey (e.g., the Cost, Quality and Child Outcomes Study in the U.S. in 1995 collected very detailed financial information from centres). The cost of service is perhaps also an example of a category where provinces/territories might find it useful to collect data more detailed than total cost alone so that additional indicators could be constructed. For example, it would be helpful to have an indicator measuring change in items such as wages as a percent of cost, benefits as a percent of cost or management and administration fees as a percent of cost.

(B) PAYMENTS BY PARENTS

This information would be collected as the full fee paid by parents, as discussed above under Affordability indicators.

(C) PAYMENTS BY GOVERNMENT

There are two potential sources for administrative data on government expenditures: government accounts and facility records. Currently, provinces/territories generally do not have information on government expenditures broken down by centre on the same basis as enrollment information. In child care, most subsidy information is kept separately from the system, which contains details on licensed programs and administers operational funding if it is available. Some provinces/territories are not able to identify how many subsidies there are in a specific facility and it would not therefore be possible to currently calculate the total government revenue contributed to a specific facility. Information on funding for children with special needs is frequently kept separately, sometimes by a different department. It might be possible to collect reliable and detailed data using a cross-Canada facility survey (as noted above, the American Cost, Quality and Child Outcomes study was able to do this with a sample of child care centres).

(D) DONATIONS

Provinces/territories do not currently collect information about the value of donated services. After some discussion of rules for valuing donated services, these could be coded on an annual return from facilities.

INDICATORS OF QUALITY

There are two main ways of assessing quality in ECEC programs: collecting data on predictors of quality and doing observations to establish process quality. Process quality in child care is typically assessed using well-established indexes such as the ECERS/ITERS scales (for centres) and FDCRS scales (for family child care homes). Elements that research has established predict or are associated with variations in process quality include: child-staff ratios, group size, wages/benefits, education level of staff, turnover and morale. This information would have to be broken down in the same way as the availability and affordability indicators above: by geographical area, ages of children, hours/weeks of service available, auspices, and type of program.

As a model, the *You Bet I Care!* approach of obtaining process quality scores from a pan-Canadian sample of ECEC programs could be expanded to include kindergartens and nursery schools. It may be that over time, provinces/territories could develop systems for administering a quality measure incorporated into their own annual licensing and inspection process. Elements of this are already under way in several provinces.

Comparable cross-Canada data on quality would be improved by developing a mechanism to collect comparable information on predictors of quality including:

- Staff/child ratios (by age);
- Group size (by age);
- Staff training in ECEC;
- Wages and benefits;
- Staff turnover.

To analyze wage and benefit information in a meaningful way, it would need to be matched to job classifications and therefore it would be necessary to collect information on job classifications also. This would require a common classification system for the variety of staff qualifications in child care across Canada. These data could be collected in a cross-Canada facilities survey on a sample or by each province/territory using an annual return process.

VARIABLES REQUIRED TO PROVIDE BREAKDOWN INFORMATION ON CHARACTERISTICS OF SERVICES

In order to provide the possibility of analyses of data collected to construct availability, affordability and quality indicators, data on several meaningful breakdowns would be necessary.

- Geographic location. Establish commonly-used classifications to identify the geographic location of the facility including characteristics of the facility;
- Age of children. Collect the age in months of each child enrolled in a program (on a particular date each year);
- Duration of service for each child (weeks, days, hours, extra days, unusual hours/days)
- Type of service (kindergarten, child care centres, nursery/preschool, family child care for both space capacity and enrollment purposes);
- Special needs (age, number and duration of service, special grants, allowances or subsidies are contributed to support programming for these children);
- Annual data on family resource programs;
- Annual data on voucher/parent payments by child;
- Auspice (common definition—for-profit, not-for-profit, public);
- Program sponsorship (employer, faith organization/cultural organization, parent group, multi-service agency, etc).

TECHNOLOGY

Consideration should be given to the technical aspects of data collection and management at both the governmental and facility client levels.

SECTION V

Conclusions and recommendations

NEW DIRECTIONS

This report coincides with the beginning of a new key initiative in Canadian ECEC. The March 2003 Multilateral Agreement on Early Learning and Care is intended "to further promote early childhood development and support the participation of parents in employment or training by improving access to affordable, quality early learning and child care programs and services". The intergovernmental agreement entered into by the federal government and all provinces/territories (except Quebec) is a "first" in ECEC in Canada. Federal funds have been identified for 5 years: $25 million in year 1, rising to $350 million in year 5. To advance the above objective, "Ministers agree to further invest in provincially/territorially regulated early learning and child care programs for children under six. In the context of this framework, regulated programs are defined as programs that meet quality standards that are established and monitored by provincial/territorial governments". The Agreement sets out principles for "effective approaches to early learning and child care: available and accessible; affordable; quality; inclusive and [respective] of parental choice".

What is perhaps most pertinent for this project on cross-Canada basic ECEC data is the governments' recognition of "the importance of being accountable to Canadians" and their commitment to "transparent public reporting that will give a clear idea of the progress being made in improving access to affordable, quality early learning and child care programs and services". The commitment is to annual reporting of "descriptive and expenditure information on all early learning and child care programs and services":

- Indicators of availability, such as number of spaces in early learning and child care settings broken down by age of child and type of setting;
- Indicators of affordability, such as number of children receiving subsidies, income and social eligibility for fee subsidies, and maximum subsidy by age of child; and
- Indicators of quality, such as training requirements, child/caregiver ratios and group size, where available.

Finally, the Multilateral Agreement says, "governments will strive to continue to improve the quality of reporting over time" (Intergovernmental Conference Secretariat, 2003). While this public reporting initiative is still in the early stages, this is the first time that explicit indicators for reporting on improvements in ECEC programs have been specified.

This report has described how and why data, indicators and research can play a key role in strengthening ECEC policy and programs as well as in enhancing public accountability. Today, the idea that early childhood education and care programs are important for children's well-being, for families, and for society at large has wide support and currency. It has also become apparent that it is necessary to be able to account for, plan for, support and shape these programs provincially/territorially, at a pan-Canadian level and internationally.

This report has provided an overview of the current state of ECEC data in Canada with considerable detail in some areas. The following recommendations are put forward as suggestions to beginning to fill gaps in basic data, assessment and evaluation and research.

RECOMMENDATIONS

1. NEW DATA COLLECTION VEHICLES

To fill current gaps in essential comparable basic data, several new regularly-collected surveys are proposed.

(A) CROSS-SECTIONAL PARENT SURVEY

Either as an add-on to the Labour Force Survey (50,000 households) or added to the Canadian Community Health Survey (160,000 households). Every three years, the range of questions included in this survey would be expanded to include some additional topics. Parents with children aged 0-12 would be included in the survey regardless of employment status. It would be important for this survey to be structured so as to provide samples in each province/territory to allow adequate and useful analyses. Topics would include types of care, hours, convenience, child characteristics, family characteristics (employment, wage, other income, education, marital status, family composition, use of maternity/parental leave, other [use of Child Care Expense Deduction and/or credits, child care subsidy, etc.])

(B) SURVEY OF ECEC FACILITIES

An annual survey of a sample of programming, financial, staffing and compensation issues in facilities providing ECEC. Include sub-surveys of staff and directors. Topics covered would be similar to those included in *You Bet I Care!* but the range of services covered would be expanded and include more details on costs and revenue sources, on programming and on staff benefits than YBIC. Every 3 years, this survey would be linked to on-site observations of quality using accepted instruments of quality assessment (such as the ECERS/ITERS/FDCRS and Arnett scales) in the full sample of facilities or a subset of the full sample. It would be important for this survey to be structured so as to provide samples in each province/territory to allow adequate and useful analyses.

(C) LONGITUDINAL STUDY LINKING ECEC USE AND QUALITY TO CHILD/FAMILY OUTCOMES

A longitudinal vehicle to assess the effect of variations in quality and programming in ECEC in the Canadian context on child and family outcomes would be desirable. These effects have been identified in research in the United States and in Europe but not conclusively in Canada. This vehicle should be able to assess differences in effects across particular types of families (e.g., low-income, immigrant, Aboriginal, single parent, two parent). Although the work of the NLSCY would inform this research (it includes detailed information on child and family outcomes), the NLSCY does not currently include the necessary on-site quality observations in a range of ECEC facilities. It would be important to use a research design (e.g., the NICHD study) that could disentangle the role of family background and inherited abilities from the direct effects of variations in the quality of care and education.

2. IMPROVE UTILIZATION OF EXISTING DATA COLLECTION VEHICLES

Existing data collection vehicles such as the Census, Labour Force Survey, Consumer Price Index and the Employment Insurance Commission reports could contribute directly to enhancing knowledge and understanding about early childhood education and care in Canada. For example, the Consumer Price Index could track changes in the prices of different types of child care used by families across the country. This would create a data series of variations over time. Similarly, the Survey of Household Spending should provide more detailed information about child care spending (extremely important for families with young children) by distinguishing parental expenditures on different types of child care, rather than treating child care as a "lump". Some countries such as the United States use the Census to collect data about ECEC for the population. This and other potential changes to existing data instruments would be useful for collecting comparable pan-Canadian ECEC data.

3. IMPROVE HARMONIZATION OF PROVINCIAL/TERRITORIAL ADMINISTRATIVE DATA

Currently, all provinces/territories collect and organize some data about regulated child care, kindergarten and some other early childhood services. However, some of these data are relatively limited and, due to different definitions and approaches to reporting, it is often difficult to use them in a summary sense across jurisdictions to understand pan-Canadian ECEC.

Consistent with the September 2003 Multilateral Agreement, intergovernmental cooperation to move towards some common approaches and indicators would be useful. This is not to suggest that individual jurisdictions would not continue to collect information for their own purposes based on their own information needs. It is, however, suggested that data required for cross-Canadian comparison purposes to be obtained by provincial/territorial authorities would use a common process. Note that, as described above, some of these data could be provided through other methods than harmonized administrative data.

4. DEVELOPING A CANADIAN POLICY AND PROGRAM DATABASE

Up-to-date, expanded information on the legislative, program and funding specifics of ECEC in Canada such as that provided in *Early Childhood Education and Care in Canada* (Childcare Resource and Research Unit, 2002) should be available. Work would need to be done to coordinate the ways in which this information is collected and categorized across provinces/territories and federal programs.

5. A PROGRAM OF ECEC RESEARCH

In order to provide good public accountability and good policy development in ECEC, a sustained, broad program of research is essential if children's development and services are to be understood in the Canadian context. The term research encompasses a range of disciplines, methodologies, approaches and kinds of questions. Disciplines that have roles to play in a child development knowledge strategy include psychology, child development, sociology, economics, political science, anthropology, medicine and others. Different disciplines employ different methodologies. These not only include a range of kinds of research questions but also include both quantitative and qualitative research, and use surveys, observations and interviews. Evaluation research tends to cross discipline lines and can include a variety of kinds of methodologies and kinds of measures. Policy analysis is also a form of research that crosses disciplines and has its own approach to methods. Much of the research would be carried out by academic researchers at universities and groups in the community but these players need the support of on-going research program with a long-term agenda.

6. COORDINATING DATA COLLECTION AND ORGANIZATION

A pan-Canadian approach to ECEC data requires a home. It requires a designated body that is consultative, has research expertise and the participation of the different levels of government, academics, data users and other interested constituencies. There needs to be a place and a process for establishing an agenda and a plan for organizing data collection and analysis, for facilitating the discussion and consultation necessary to bring this about, and to stimulate academic and policy expert discussions about research priorities and methods. This body would be responsible for developing the process, establishing a framework for it and facilitating a comprehensive on-going program of funded research.

Such a group or body could be modeled in several different ways. The example of CIHI, the Canadian Institute for Health Information is a relatively elaborate model. Or a recent initiative in education may have more direct links to ECEC. Currently, development of the Canadian Learning Institute, committed to in the 2002 Throne Speech by the Government of Canada, is underway. Its mandate is "to create the skills and learning architecture that Canada needs" and to "build our knowledge and report to Canadians about what is working and what is not". The intention is to include ECEC in the conception of lifelong learning. In an initial round of consultation, stakeholders "emphasized that there was a need to ensure that high quality data are available in Canada, if the mandate of the Canadian Learning Institute is to succeed" (Levin & Seward, 2003).

Thus, there are a number of kinds of structures that could be used for collaborating on and coordinating plans for ECEC data. But as this report noted in an earlier section, analysis of efforts to establish national or international approaches to data, indicators and research usually reveals a government agency or an organization body with research and policy expertise that plays a central organizing role. It seems unlikely that a coordinated approach to ECEC data will emerge unless there is a "home" for it.

IN SUMMARY

This report suggests a number of ways to begin to fill the gaps in Canada's ECEC data situation. As governments, community groups and researchers recognize the importance of ECEC for Canada, good data and research will be essential for moving ahead. While there may be more than one solution (or a solution with more than one component), it is now time to take the first steps to collaborate on devising and implementing a workable strategy for improving Canadian data on early childhood education and care.

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APPENDIX A

PROVINCIAL/TERRITORIAL DATA METHODS SURVEY QUESTIONNAIRE

The Childcare Resource and Research Unit is interested in the early childhood education and care data that you collect. We recognize that it is unlikely that you collect all of the information requested here and also recognize that it is quite possible that other ministries or departments collect other information relevant to early childhood education and care. However, we would very much appreciate your assistance in helping us understand the scope of present early childhood education and care data in Canada.

Firstly, could you tell us something about the way in which you collect early childhood education and care information.

Question	Yes	No	Additional Information
Does your province/territory have a data information system for regularly collecting information about early childhood education and care services? What is the system called?			
For what purposes does your province/territory collect early childhood education and care data? · budgeting · planning · other: please describe			
Thinking about the organization of your data collection system, is it organized around a single unit of analysis, for example: a) licensed facility b) owner/operator c) child d) family e) other Or more than one units of analysis. Please identify all that apply. f) licensed facility g) owner/operator h) child i) family j) other			

Question	Yes	No	Additional Information
For example, can you tell us how you deal with the following situation: If one owner operates three child care centres, is the information entered by owner or child care centre? Is there one record or three?			
Which government department has responsibility for early childhood education and care data information?			
Which office/department actually collects and enters the information?			
Thinking about your largest data collection project, how frequently are the data collected? Which data?			
Other information about your data collection not mentioned here.			
Please attach a description of the system to this questionnaire.			

Thinking about child care facilities in your province/territory, could you tell us which of the following information you collect. Please feel free to add useful information that we have perhaps not asked you about.

Question	Yes	No	Additional Information
Which of the following information do you collect? · Number of child care centres by: - hours of opening - hours of closing - address - geographic location: community/ward/town, etc. - type of building: church/school/community centre/apartment building, etc. - auspices: public/not-for-profit/for-profit, etc. - total capacity - numbers of children receiving subsidy - number of groups in the centre - actual ages of children (e.g. 14-3 year olds) - age range of children at the centre (which age groups) *infants*			

Question	Yes	No	Additional Information
toddlers *preschoolers* *school-age* - number of children in different groups - type of program: *group centre* *nursery school* *school-age* - additional features of program, such as: *workplace child care* *Francophone child care* *Aboriginal child care program* *exclusively for children with special needs* *other unique features?*			
Number of family home child care agencies in your province/territory (if applicable)			
· Number of family child care homes by: - hours of opening - hours of closing - extended hours/weekends/evenings, etc. - address - geographic location: community/ward/town, etc. - auspices - total number of family homes - number of children receiving subsidies - age range of children at the home by: *actual ages (e.g. 2-3 year olds)* *age groups:* *- infants* *- toddlers* *- preschoolers* *- school-age* - number of children with special needs - additional features of program: *workplace*			

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Question	Yes	No	Additional Information
Francophone children *Aboriginal children* *children with special needs* *other unique features?* - number of group family homes			
If your province/territory operates, funds or licenses resource centres, what information do you collect: · Number of resource centres by: - address - geographic location: community/ward/town, etc. - type of programs offered - ages of children - types of parent involvement - duration of parent involvement (hours or by activity) - total number of children served by: *day* *week* *month* *other*			
· Number of other early childhood education and care services: - drop-in programs - respite programs - playgroups - toy-lending libraries - other			
Is there other information you collect about licensed facilities not mentioned here?			

Thinking about the informal or unlicensed child care arrangements, does your province/territory collect any information about these:

Question	Yes	No	Additional Information
Total number of children using · babysitter · nanny · paid relative			
Hours per day			
Hours per week			
Fees paid to babysitter/nanny/paid relative			
Qualifications of babysitter/nanny/paid relative			
Number of children per babysitter/nanny/paid relative			
Unpaid care			
Working parents sharing child care			
Children providing self-care			

Thinking about the children using child care services in your province, do you collect information specifically about the children and their families (as opposed to the child care facilities):

Question	Yes	No	Additional Information
Number of children enrolled in child care centres by: - age range–28 children between 3 and 4 years; or - actual age–20 children: 2 years old - part-time - full-time - number of hours - residence in catchment area			

Question	Yes	No	Information
- race/ethnicity - family type: two-parent, sole parent, other relative/guardian, etc. - family income - education of parent/guardian - other arrangements used - preferences - duration of use per week - duration of use per day			
Number of children enrolled in family day care homes by: - age range–3 children between 2 and 4 years; or - actual age–2 children aged 2 years - part-time - full-time - number of hours - residence in catchment area - race/ethnicity - family type: two-parent, sole parent, other relative/guardian, etc. - family income - education of parent/guardian - other arrangements used - preferences - duration of use per week - duration of use per day			
Is there other information you collect about the children/families and their child care arrangements not mentioned here?			

Please tell us how you collect financial information about child care services in your province/territory.

Question	Yes	No	Information
In child care centres Fees charged: - full-day			

Question	Yes	No	Information
- part-day by: - no. of hours - group of hours (e.g. 1-5 hours; 5-7 hours, etc.) - by weekend - by evening - overnight			
In family child care homes Fees charged: - full-day - part-day by: - no. of hours - group of hours (e.g. 1-5 hours; 5-7 hours, etc.) - by weekend - by evening - overnight			
In resource centres Fees charged: - full-day - part-day by: - no. of hours - group of hours (e.g. 1-5 hours; 5-7 hours, etc.)			
For other child care services: - information and referral - drop-in programs - respite care - toy-lending library - playgroups - other			
Fee subsidies by: - child - type of family (e.g. two-parent, sole parent, guardian) - family income - amounts spent per child - total budget on fee subsidies			

Question	Yes	No	Information
Other child care grants (e.g. capital, direct operating, etc.) by: - child - type of family - family income - amounts per child - total budget			
Could you tell us how your total budget expenditure on child care services is collected and calculated? Including budget breakdowns?			
Is there other financial information you collect not mentioned here?			

Please tell us about how you collect information on your regulations:

Question	Yes	No	Information
Do you regularly inspect child care facilities?			
How often?			
Title of inspector			
Caseload of inspector			
Is there separation between inspection and advisory roles?			
What happens when you receive a complaint?			
How is the complaint process documented ?			
Is there other information you collect not mentioned here?			

Thinking about the child care human resources in your province/territory, please tell us what information you collect about staff in child care programs.

Question	Yes	No	Information
Characteristics of staff in child care centres - number of staff - age - gender - title of staff - qualifications of staff - hours worked by individual staff or FTEs? - % full time - % part time - % casual - years of service - turnover - job satisfaction - wages - benefits - training taken - number of spaces per worker - number of children enrolled per worker			
Characteristics of providers in family child care homes - number of providers - gender - age - qualifications of providers - hours worked by providers - years of service as a family home child care provider - turnover of providers - career satisfaction - earnings - benefits - training taken If a group family home: - number of spaces per worker - number of children enrolled per worker			

Question	Yes	No	Information
Characteristics of staff in family resource centres? - number of staff - gender - age - qualifications - hours worked - % full time - % part time - % casual - years of service of staff - turnover of staff - career satisfaction - earnings - benefits - training taken - number of program spaces per worker - number of children registered per worker			
Is there other information you collect not mentioned here?			

There is probably a lot of other information you collect that we haven't mentioned here. Perhaps you could tell us about any other child care related information that you think is important:

Question	Yes	No	Information
Information about child health			
Liaison with local: - kindergartens - community programs - public health - other social agencies - other?			

Question	Yes	No	Information
Parent involvement in programs			
Families of children			
Information about municipal provision and spending on early childhood education and care services			
Is there other information you collect not mentioned here?			

To help us ascertain what has been collected in the past and to benefit from your experiences, please tell us about any special surveys related to early childhood education and care services that you have conducted in the past five years:

Question	Yes	No	Information
Surveys about parental preference and use			
Surveys about need and use			
Comparison between demand and use			
Parent Satisfaction surveys			
Non-user surveys concerning: - their needs - explicit demands not met - their future early childhood education and care plans			
Any other surveys or studies you have collected or funded?			
If they are available, could you please send us copies of surveys/ questionnaires you have conducted?			
Finally, could you take a few minutes to think about and list the strengths and weaknesses of your province/territory's early childhood education and care data collection methods.			

Appendix B

PROVINCIAL/TERRITORIAL KINDERGARTEN QUESTIONNAIRE (BY PHONE)

Question	Yes	No	Notes
When are children eligible for kindergarten?			
Do you collect: Number of children enrolled			
Hours children enrolled			
Any personal info on children			
Which?			
Reports on program activities, content, etc.			
Total kindergarten spending			
Cost per kindergarten child			
Average class size			
Teacher:child ratios			
Teacher and education assistant:child ratios			
Teacher qualifications			
Personal information on teachers			
Which?			
Education assistant qualifications			
Number of children with special needs			
Which special needs?			

Appendix C

DETAILS OF PROVINCIAL/TERRITORIAL CHILD CARE DATA TECHNOLOGY (2000-2001)

NEWFOUNDLAND

Two data systems: (a) Day Care Licensing System which records the number of spaces and annual licences; (b) A regionalized subsidy system (which also tracks the National Child Benefit which contributes $100 per child subsidy and $200 per child for equipment grants). The Child Care Services Branch of the Department of Health and Community Services does not have access to the subsidy statistics which are collected regionally by Child, Youth and Family Services. A total figure is provided to Child Care Services which is incorporated onto a spreadsheet. Both systems are in transition to the new Client Retrieval Management System (CRMS). In the meantime, the Department has to keep statistics up-to-date on the existing custom built program. Eventually they will be able to receive the statistics from the regions and the central database will be automatically updated. The Department previously conducted a survey to update their records but because of the difficulties of compliance, this is no longer undertaken.

PRINCE EDWARD ISLAND

Uses two systems: (a) Old dbase system which handles licensing and staff certifications. The licensing system collects "tombstone" data on facilities, the numbers of children in different categories, information on the last inspection, licensed capacity and the numbers of staff with/without training; (b) A separate mainframe system for subsidy administration. This has two components: Subsidy Financial System and the Subsidy Information System. This system issues monthly financial reports and information reports as needed. The licensing system and subsidy system cannot connect. Thirdly, PEI Department of Health and Social Services collects data on grant administration manually and the records are kept in a paper file. They are considering purchasing a new program used by the Department of Veteran Affairs.

NOVA SCOTIA

Currently in transition to a Microsoft Access system which is used for licensing information and collecting subsidy information. Information is collected regionally and subsequently centralized. Dependent on accessing information manually.

NEW BRUNSWICK

In the process of reorganization. Currently: RPSS—a resource management system is used for licensing; NB Case for handling day care subsidy system and a departmental survey for collecting detailed program and enrollment information. These systems are not connected. Everything is currently in flux and the surveys are no longer very useful as there is no incentive for facilities to complete them; the Department receives a 50% return rate.

QUEBEC

Has a sophisticated data system that is able to collect information on the centres de la petite enfance (CPEs), the staff and the family but each database has to be individually updated. This system has been in transition but will be very comprehensive as of January 1, 2001. The CPEs submit two key reports annually: Activities Report and Financial Report. These provide the bulk of information needed. 88% of children aged 5 are in full day kindergarten and these statistics are kept by the Ministry of Education. Quebec also conducted parent surveys (1993 and 1998) used for regional planning; another survey is planned for early 2001.

ONTARIO

Is developing a new system: "Child Care Management System", composed of two pieces: Service Managers Module and the Ontario Data Warehouse (still in formative stage under development). In parallel, system previously used is still functioning: the Service Management Information System (not exclusive to child care). Previously there were two other systems:

1. Child Care Quarterly Reports
2. Day Nurseries Information System

These are now defunct and have been rolled up into the Service Management Information System or the Licensing module. CCMS contains aggregate data at the provincial level; municipalities collect and own the data. Province does not keep the individual records.

MANITOBA

System is under a great deal of stress and province is currently working on replacement beginning with a subsidy application scheduled to come on stream in December 2000. It is designed to integrate information on licensing and subsidies and will have the capacity to track enrollments and staff. It will also link up with Manitoba Family Services and Housing and other service areas. Redevelopment is estimated to take three years and they do plan to build in an internet component. It will incorporate child care worker information and a complaints monitoring system.

SASKATCHEWAN

Retains its 1989 mainframe system operated by the IT department; characterized as "old, corrupted, not reliable, frustrating"; it is also scheduled for replacement by 2002. It does not meet their needs for management reporting, performance evaluation, integration of service areas and supports to timely processing. Six sub-systems: Facilities; Subsidy; Grants; Administration; Utilities and Micro-Computer Subsystem (Maximizer) for licensing information.

ALBERTA

Child Care Information System is a new system converted last year. It has a strong capacity to link financial information with client and service delivery information. It is PC/LAN-WAN based and fully compatible with Windows applications. It collects specific child and family information for subsidized families and children; performs subsidy income eligibility calculation for applicants; identifies each child care centre or family day home in which all children (subsidized and non-subsidized) receive service and the duration of that service. With regard to service delivery information, it collects licensing and inspection information on all child care centres and family day homes, complaints, staff qualifications for all child care centre staff and collects monthly claims for calculating subsidy and administration fee payment. The CCIS also has a strong management information component including tracking of financial information, expenditure information for every child care centre and family day home by claim period or subsidized child. It also contains staff/child ratio reports, vendor listings and profiles and has a contract management component. Runs from licensing through to payment. The incentive for providing timely submission is fast claim processing time. Although this works it is not as effective as when the operating grant was still in place.

BRITISH COLUMBIA

Is planning to replace its current system, as well as conduct a new survey in fall 2000 to assess needs and preferences of parents. They experience considerable difficulty with data collection as the different ministries included in child care administration house different systems, collecting different pieces of information that cannot be cross-tabulated:

- The Ministry of Health is responsible for licensing;
- The Ministry of Children and the Family is responsible for broader child protection, child development services and children with special needs;
- The Ministry of Social Development and Economic Security is responsible for subsidy administration and grant administration (such as the Compensation Contribution Program—a wage enhancement grant).

In addition, regionalized authorities of the Ministry of Health collect the licensing data in different ways at different times.

NORTHWEST TERRITORIES

Uses Word Tables to track licensing information; working on improving system. Separate subsidy system housed in Income Support.

YUKON TERRITORY

Access program for licensing; Excel spreadsheet for grants; SAS program for subsidies (not connected to licensing information).

NUNAVUT

Collected base information through a survey of child care operators and Aboriginal Head Start programs. In addition, the survey covered schools, health and social services, hamlets, churches, wellness committees and health committees. This survey information can be matched to demographic and health information collected by Statistics Nunavut. This system, the *Community Profile Data System* is complemented by information collected through the filing of an annual report by operators reporting on the funding they receive. This system, however, is in the process of change and is still being developed. Through a process of interdepartmental integration (Children First Secretariat), Nunavut is working towards integrating data systems across government despite the limitations imposed by decentralization and technological capacity.

Appendix D

DETAILS OF PROVINCIAL/TERRITORIAL CHILD CARE ENROLLMENT DATA METHODS

NEWFOUNDLAND

Government does not collect specifics of enrollment by age for all children—only for children receiving subsidies; centres keep age information on children with subsidies but it would be difficult to access.

PRINCE EDWARD ISLAND

Collects information on numbers of children registered in programs, by year of age, (threes and fours combined) at the time of annual inspection.

NOVA SCOTIA

Annually collects information about the numbers of children enrolled on full day/full week or full day/part week basis in both centre and family child care) by age group.

NEW BRUNSWICK

Tracks year of age and age range through survey but does not have a complete list and does not conduct survey every year.

QUEBEC

Tracks enrollment by age through activity reports.

ONTARIO

Does not track the actual ages of children, although the municipalities may.

MANITOBA

Collects numbers of children enrolled in an age group not by year of age but collects the actual age for children in receipt of a subsidy.

SASKATCHEWAN

Collects enrollment by date of birth for subsidized children only.

ALBERTA

Collects enrollment by date of birth for all children (including family child care).

BRITISH COLUMBIA

Does not collect enrollment information; licensed capacity by age group only.

NORTHWEST TERRITORIES

Does not collect enrollment information; licensed capacity by age group only

YUKON

Collects monthly enrollment data by age group not actual ages.

NUNAVUT

Actual ages entered on registration and attendance forms but not yet entered in database because they are still in the early developmental stages of creating a system.

Appendix E

DETAILS OF PROVINCIAL/TERRITORIAL CHILD CARE DATA ON DURATION OF SERVICE

NEWFOUNDLAND

Treats any child attending less than 4½ hours a day as part-time attendance, and they include in this category children who only attend less than five days a week.

PRINCE EDWARD ISLAND

Can identify seasonal programs by months of service. Prince Edward Island records capacity and enrollment by part-time or full-time. It classifies part-time as half-a-day or less than five days a week for both centres and family child care.

NOVA SCOTIA

Information collected on enrollment for full day; mornings; afternoon; before school/lunch/after school; lunch only; after school only; after school and supper; lunch and afternoon; overnight

Centres: full day/full week or full day/part week.

NEW BRUNSWICK

Collects by survey (50% return rate) enrollment in two categories by year of age:

- half day/part time;
- full day/full time on either a daily or occasional basis (meaning less than 3 days per week, before school, lunch and/or after school, or professional development days, or school holidays).

ONTARIO

Does not track detailed information about duration of services but the system is set up for the municipalities to do so.

MANITOBA

Categorizes attendance by time blocks: 0-4 hours; 4-10 hours; over 10 hours.

ALBERTA

Is able to determine actual hours of service from monthly receipt of attendance records.

BRITISH COLUMBIA

Does not collect information about duration of service.

NORTHWEST TERRITORIES

Collects information on licensed capacity in groups of hours.

YUKON

Collects enrollment information on part and full-time basis

NUNAVUT

Through its survey, knows full day capacity.

Appendix F

DETAILS OF PROVINCIAL/TERRITORIAL DATA COLLECTED ABOUT FAMILY CHILD CARE

NEWFOUNDLAND

New program. Data collection not yet started, but they will be both licensing homes directly and through agencies.

NOVA SCOTIA

Operates family child care through agencies and also operates satellite homes through centres. It does collect enrollment data by age group and duration of service annually, in accordance with categories used for centres, for full day; mornings; afternoon; before school/lunch/after school; lunch only; after school only; after school and supper; lunch and afternoon; overnight.

NEW BRUNSWICK

Same information requested by survey as for centres. Enrollment by age and duration of service.

QUEBEC

Family child care now integrated into CPEs. Enrollment information is therefore collected but it is at the level of the CPE and not down to the actual home. If there are more than 6 children in a home, an assistant is employed.

MANITOBA

Collects basic "tombstone" data about the provider; enrollment data for subsidized children only.

SASKATCHEWAN

Directly funds, licenses homes; collects number of homes and providers used each month.

ALBERTA

Collects the actual ages of children enrolled. Statistics on duration of use mirror the data collected in centres; similarly with the price, special needs enrollment and special needs grants.

BRITISH COLUMBIA

Homes licensed directly and information kept on licensed homes but not on enrollment of children.

NORTHWEST TERRITORIES

Does not collect enrollment data. Collects licensed capacity.

YUKON

Tracks a lot of detail through monthly enrollment reports.

NUNAVUT

Only has two homes—administrative data collection system still being established.

Appendix G

DETAILS ON DATA ON PROVINCIAL/TERRITORIAL CHILD CARE FUNDING

NEWFOUNDLAND

Equipment grants/subsidy not tracked by Child Care Services but by the regions; aggregate figure for the region, not individual facilities, provided to Department.

PRINCE EDWARD ISLAND

Subsidies tracked separately; direct operating grants; infant incentive grant; special needs grant, administered by Department. Data collected manually by department annually on direct grants to 60% of centres.

NOVA SCOTIA

Subsidies, start-up grants, equipment grant, infant incentive grant, salary enhancement grant, special needs grant, family day care administration grant, child development centre grant. Subsidies tracked in a separate database.

NEW BRUNSWICK

Subsidies only. Tracked through NB Case. Information not collected on survey.

QUEBEC

Project management grants, start-up grants, special needs funding, relocation grants, operating grants are all combined into one global grant to CPE to cover all operations.

ONTARIO

Subsidies, wage grants, special needs funding tracked by municipalities. Aggregate figure for the municipality, not individual facilities, provided to provincial government.

MANITOBA

Operating grants at different levels for infants, preschoolers and school-age children. Different departments have information on Public School Finance Board, Community Places program, (lottery funding), disabilities program; and operating grants which vary in amount.

SASKATCHEWAN

Subsidies tracked separately. Start-up/operating/wage/special needs grants, teen infant centre grants, equipment grants administered by Division. Can calculate per child.

ALBERTA

Subsidies and special needs grants (Inclusive child care funding) and family day home administration fee only. Can be calculated on a per child basis.

BRITISH COLUMBIA

Subsidies, equipment and repair/start-up/Child Care Compensation Contribution Program, infant-toddler incentive grants for family child care providers. It is not known which programs receive the funding because these details are tracked separately.

NORTHWEST TERRITORIES

Subsidies/operation and maintenance/start-up grants tracked through two different systems.

YUKON

Subsidies 80% of children, operating grant, capital, maintenance grants for centres only. Tracked through two systems.

NUNAVUT

Subsidies, Healthy Children's Initiative, start-up, operating and maintenance.

Appendix H

NOTES FROM PROVINCIAL/TERRITORIAL CHILD CARE DATA COLLECTION SURVEY

A questionnaire on provincial/territorial ECEC data methods was prepared and sent to all of the child care directors in the provinces and territories. (Appendix A). Officials were asked to review and respond to the questionnaire in collaboration with their colleagues from other departments where appropriate. Appointments were made to interview child care officials and colleagues in all of the provinces. Face-to-face interviews were conducted with these officials in all provinces between May and August 2000. Due to cost considerations, telephone interviews were arranged and conducted with officials in the territories.

Summary reports were prepared for each province/territory based on their responses to the questionnaires. Key summary data were compiled in a chart containing information on data in each province/territory. The individual provincial/territorial charts were forwarded to each official for their approval and confirmation. The summary chart is laid out in Table 2.

Appendix I

LOCATING DATA SOURCES IDENTIFIED IN SECTION III

Data sources identified in section III may be available in print (see references) and/or on the internet. Note that the web-sites provided below may include the data sets themselves while others may only provide background information and/or selected papers about the data source.

1. DATA ON DEMAND/USE/EXPENDITURES ON ECEC SERVICES AND PROGRAMS

CANADIAN DATA SOURCES

Canadian National Child Care Survey (CNCCS)
A consortium of university researchers and Statistics Canada
Funded by Child Care Initiatives Fund, Health and Welfare Canada, provincial governments and other sources
(One-time-only. Data collected in 1988).

Initial Results from the 1981 Survey of Child Care Arrangements
Labour Force Survey Research Paper Number 31
Statistics Canada (1982)
(Microdata documentation and users' guide available)
Available on-line at: http://dissemination.statcan.ca/english/sdds/3807.htm

National Longitudinal Study of Children and Youth (NLSCY)
Statistics Canada and Applied Research Branch, HRDC
(Continuing survey; every two years from 1994)
Available on-line at: http://www.hrdc-drhc.gc.ca/sp-ps/arb-dgra/nlscy-elnej/home.shtml

DATA SOURCES FROM OTHER COUNTRIES

UNITED STATES

Survey of Income and Program Participation (SIPP)
U.S. Census Bureau
(Continuing)
Available on-line at: http://www.sipp.census.gov/sipp/

National Child Care Survey (Complemented by *Profile of Child Care Settings*–see below) ***(1991)***
Washington, D.C.: Urban Institute
(One-time-only)

AUSTRALIA

Child Care Survey
Australian Bureau of Statistics
(Every three years)
Available on-line at: http://www.abs.gov.au/ausstats/abs@.nsf/0/52377CDB7D3AE3FDCA256BD000284E84?Open

2. DATA ON CHARACTERISTICS OF PROGRAMS/WORKERS (TEACHERS)

CANADIAN DATA SOURCES

Caring for a Living
Canadian Child Care Federation and the Canadian Day Care Advocacy Association, Funded by Child Care Initiatives Fund, Health and Welfare Canada
(One-time-only, 1991-92)

You Bet I Care!
University of Guelph, University of British Columbia and University of Calgary
Funded by Child Care Visions, Human Resources Development Canada.
(One-time-only, 1998-99)
Available on-line at: http://action.web.ca/home/cfwwb/attach/ybic_report_1.pdf

Providing Home Child Care for a Living
Goss Gilroy Inc. Management Consultants
Commissioned in association with the Child Care Human Resources Sector Study
Funded by the Sector Studies Branch, Human Resources Development Canada
(One-time-only, 1998)

Survey of Unlicensed Child Care Providers
Canadian Child Care Federation
Funded by the Sector Studies Branch, Human Resources Development Canada
(One-time-only, 1998)

Survey of Institutions Providing Early Childhood Training Programs
Statistics Canada, Funded by Human Resources Development Canada
(One-time-only–Commissioned as part of the Child Care Human Resources Sector Study, 1997)

National Graduate Survey
Statistics Canada and Human Resources Development Canada
(Occasional. Special runs on ECE graduates conducted for the Child Care Human Resources Sector Study, 1997)
Available on-line at: http://www.statcan.ca/Daily/English/990428/d990428c.htm

A Report of Process Evaluation Survey Results: Aboriginal Head Start Urban and Northern Communities
Kishk Anaquot Health Research
Funded by Health Canada
(One-time-only, 1999)

Status Report on Family Resource Programs Across Canada
Canadian Association of Family Resource Programs (FRP Canada)
First report funded by the Child Care Initiatives Fund, Health and Welfare Canada; Second funded by Social Development Partnerships, Human Resources Development Canada
(1994, 2002)

DATA SOURCES IN OTHER COUNTRIES

UNITED STATES

Cost, Quality and Child Outcomes in Child Care Centers
Carried out by researchers at a number of universities including the University of Colorado
(One-time-only, 1995)
Available on-line at: http://www.fpg.unc.edu/~ncedl/pages/cqes.htm

CROSS-NATIONAL

UNESCO/EUROSTAT (UOE) international education data collection
International Education Indicators Project (INES)
Centre for Educational Research and Innovation,
Organization for Economic Co-operation and Development
Years of Data Collection
Phase 1: 1988-1989
Phase 2: 1990-1991
Phase 3: 1992-1996
Available on-line at: http://www.nap.edu/readingroom/books/icse/study_f.html

Information Network on Education in Europe
Pre-primary education (2002)
Eurydice database collected by EUROSTAT
(On-going)
Available on-line at: http://www.eurydice.org/Search/frameset_en.html

3. DATA ON EFFECTS OF ECEC ON CHILD/FAMILY/PARENT OUTCOMES

CANADIAN DATA SOURCES

National Longitudinal Study of Children and Youth (NLSCY)
Statistics Canada and Applied Research Branch, Human Resources Development Canada
(Continuing survey; every two years from 1994)
Available on-line at: http://www.hrdc-drhc.gc.ca/sp-ps/arb-dgra/nlscy-elnej/home.shtml

Understanding the Early Years
Human Resources Development Canada
(One-time-only, 2000-2001)
Available on-line at: http://www.hrdc-drhc.gc.ca/sp-ps/arb-dgra/nlscy-elnej/uey-cpe/pub_e.shtml

Longitudinal Study of Children and Youth in Québec (ÉLDEQ)
Santé Québec, l'institut de la statistique du Québec/University of Montreal
(One-time-only, 1998-2002)
Available on-line at: http://www.isuma.net/v01n02/jette/jette_e.shtml

DATA SOURCES IN OTHER COUNTRIES

UNITED STATES

National Household Education Survey (NHES),
Early Childhood/School Readiness Component
U.S. Department of Education
National Centre for Education Statistics
(Ongoing)
Available on-line at: http://nces.ed.gov/NHES/index.asp

Early Childhood Longitudinal Study: Kindergarten Class of 1998-99
U.S. Department of Education,
National Center for Education Statistics
(Continuing)
Available on-line at: http://nces.ed.gov./ecls/

Study of Early Child Care
Researchers from multiple universities
National Institute of Child Health and Human Development (NICHD)
National Institutes of Health
(Continuing, began in 1991)
Available on-line at: http://www.nih.gov/news/pr/apr97/nichd-03.htm

The Child Development Supplement
Panel Study of Income Dynamics (PSID)
(One-time-only add-on; Continuing survey, 1997)
Available on-line at: http://www.isr.umich.edu/src/child-development/home.html

The Children of the Cost, Quality and Child Outcomes Study Go to School
U.S. Department Of Education
National Centre for Education Statistics
(One-time-only, 1999)

National Longitudinal Survey of Youth (NLSY)
U.S. Department of Labor
(Ongoing, 1988)
Available on-line at: http://www.bls.gov/nls/nlsview.htm

UNITED KINGDOM

T.F. Osborn and J.E. Milbank
(One-time only, data collected in 1970, published in 1987)

FRANCE

Ministère de l'education nationale
(One-time-only, data originally collected in 1985)
Described in Richardson and Marx (1989) and Bergman (1999)

OTHER RESEARCH ON ECEC AND CHILD AND FAMILY OUTCOMES

Carolina Abecedarian Project
Researchers at the University of North Carolina
Study began in 1972; Many publications over the intervening years
(One-time-only)
Available on-line at: http://www.fpg.unc.edu/~abc/

SWEDEN

B.E. Andersson
Researcher at University of Goteberg, Sweden
Longitudinal study originally published in 1992; other publications in 1996)
(One-time-only)

4. ADMINISTRATIVE/REGULATORY/PROGRAM DATA

CANADIAN DATA SOURCES

Tax expenditures and evaluations
Tax Division, Department of Finance
(Annual since 1995)
A Revenue Canada publication called Income Statistics, commonly called the "Green Book" generally includes this information.
Available on-line at: http://www.fin.gc.ca/toce/2002/taxexp02_e.html

Employment Insurance Monitoring and Assessment Reports
Human Resources Development Canada
(Annual since 1997)
Available on-line at: http://www.hrdc-drhc.gc.ca/ae-ei/loi-law/eimar.shtml

Status of Day Care in Canada
Health and Welfare/ Human Resources Development Canada
(1971 – 1998)

Early Childhood Education and Care in Canada
Childcare Resource and Research Unit, University of Toronto (authors of the 2002 version were Friendly, Beach and Turiano)
2002 version funded by Social Development Partnerships, HRDC; previous versions funded by Child Care Visions and the Child Care Initiatives Fund
(Occasional, 1992, 1995, 1998, 2001)
Previous versions were titled *Child Care in Canada: Provinces and Territories*
Recent editions available on-line at: http://www.childcarecanada.org

DATA SOURCES IN OTHER COUNTRIES

UNITED STATES

Head Start
Administration for Children, Youth and Families (ACYF)
(Annual)

CROSS-NATIONAL

Thematic Review of Early Childhood Education and Care
Organization for Economic Co-operation and Development (OECD)
(One-time-only, 1998-2001 and continuing)
Available on-line at:
http://www.oecd.org/oecd/pages/home/displaygeneral/0,3380,EN-links_abstract-602-5-no-no-1259-602,00.html

5. SOURCES OF SUPPLEMENTARY AND ASSOCIATED DATA

CANADIAN DATA SOURCES

Census
Statistics Canada
(Every 5 years)
Available on-line at: http://www12.statcan.ca/english/census01/release/index.cfm

Labour Force Survey
Statistics Canada
(Monthly)
Available on-line at: http://www.statcan.ca/english/sdds/3701.htm

Survey of Labour and Income Dynamics (SLID)
Statistics Canada
(Continuing)
Available on-line at: http://www.statcan.ca/english/sdds/3889.htm

Survey of Household Spending (SHS)
Statistics Canada
(Annual)

Canadian Community Health Survey (CCHS)
Canadian Institute for Health Information
(2000-2001)
Available on-line at: http://www.statcan.ca/Daily/English/020508/d020508a.htm

DATA SOURCES IN OTHER COUNTRIES

UNITED STATES

Decennial Census
U.S. Census Bureau
Available on-line at: http://www.census.gov/population/www/socdemo/childcare.html

Current Population: Classified Index of Industries and Occupations Survey
U.S. Census Bureau
(Monthly with occasional collection of ECEC information)
Available on-line at: http://www.bls.gov/cps/cps_over.htm#overview

General Accounting Office
U.S. federal government
(Various and occasional)
Available on-line at: http://www.gao.gov

CROSS-NATIONAL

Indicators of Education Systems (INES)
Organization for Economic Co-operation and Development (OECD)
Published annually in Education at a Glance
Dataset is available in CD and on-line format
(International, OECD member countries with a component for non-member countries
(On-going)
Available on-line at: http://www1.oecd.org/els/education/ei/eag/

Social Expenditure Database (SOCX)
Organization for Economic Co-operative and Development (OECD)
International, OECD member countries
(On-going)
Available on-line at: http://www.oecdwash.org/PUBS/ELECTRONIC/SAMPLES/socxinfo.htm

Welfare in an International Perspective
Centre for Welfare State Research,
Danish National Institute of Social Research
(On-going)

Social Security Worldwide (SSW)
International Social Security Association
United States Social Security Administration and International Labour Organization
(On-going)
Available on-line at: http://www-ssw.issa.int/sswlp2/engl/page1.htm

Mutual Information System of Social Protection in the European Union
(MISSOC)
(On-going)
Available on-line at: http://europa.eu.int/comm/employment_social/missoc2000/missoc_info_en.htm

European Community Household Panel (ECHP)
Collected by EUROSTAT
(On-going)

European Survey on Working Conditions
European Foundation for Working and Living Conditions
(On-going)
Available on-line at: http://www.eurofound.ie/working/surveys.htm

ABOUT THE CHILDCARE RESOURCE AND RESEARCH UNIT

www.childcarecanada.org

The Childcare Resource and Research Unit (CRRU) at the Centre for Urban and Community Studies, University of Toronto, is a policy and research oriented facility that focuses on early childhood education and care. CRRU provides public education and policy analysis; consults on child care policy and research; publishes papers and other resources; maintains a comprehensive library and computerized library catalogue; and provides online resources and research through its website (www.childcarecanada.org).

OCCASIONAL PAPER SERIES

1. Child care for Canadian children and families: A discussion paper (1993)
2. Proceedings from the Child Care Policy and Research Symposium (1993)
3. Work-related child care in context: A study of work-related child care in Canada (1993)
4. Rural child care in Ontario* (1994)
5. Child care: Canada can't work without it (1995)
6. A sociological examination of the child care auspice debate (1995)
7. The great child care debate: The long-term effects of non-parental child care (1996)
8. Theorizing political difference in Toronto's postwar child care movement (1996)
9. Neo-conservatism and child care services in Alberta: A case study (1997)
10. How should we care for babies and toddlers? An analysis of practice in out-of-home care for children under three (1999)
11. Child care and Canadian federalism in the 1990s: Canary in a coal mine (2000)
12. More than the sum of the parts: An early childhood development system for Canada (2000)
13. Women, citizenship and Canadian child care policy in the 1990s (2001)
15. Targeting early childhood care and education: Myths and realities (2001)
16. An integrated approach to early childhood education and care: A preliminary study (2001)
17. Reforming Québec's early childhood care and education: The first five years* (2002)
18. Child care by default or design? An exploration of differences between non-profit and for-profit Canadian child care centres using the *You Bet I Care!* data sets (2002)

OTHER PUBLICATIONS

- A survey of first year early childhood education students in Ontario (1989)
- Flexible child care in Canada: A report on child care for evenings, overnight and weekends, emergencies and ill children, and in rural areas (1989)
- Assessing child care needs: Sample questionnaires (1989)
- Assessing community need for child care: Resource material for conducting community needs assessments (1989)
- Child care policy in Canada: An annotated bibliography (1994)
- The benefits and costs of good child care: The economic rationale for public investment in young children* (1998)
- Early childhood education and care in Canada 2001 (5th ed., 2002)
- Fact and fantasy: Eight myths about early childhood education and care (2003)

FACT SHEETS AND SUMMARIES

- Child care vouchers: What do we know about them? (1997)
- What does research tell us about quality in child care? (1997)
- Public policy context of child care: The issue of auspice (1997)
- Is child care a good public investment?* (1998)
- A framework for quality: A European perspective (1999)
- Values and beliefs in caring for babies and toddlers (1999)
- The rights of young children (1999)

BRIEFING NOTES

- More than the sum of the parts: An early childhood development system for Canada (2000)
- Early childhood development services: How much will they cost? (2000)
- Targeting early childhood care and education: Myths and realities (2001)
- Executive summary: Starting Strong—Early education and care. Report on an OECD Thematic Review (2001)
- Is this as good as it gets? Child care as a test case for assessing the Social Union Framework Agreement (2002)
- Building a firm foundation for lifelong learning: The importance of early childhood education and care (2002)
- Ontario's spending for regulated child care, 1942-2001 (2002)
- Early childhood education and care in Canada 2001: Summary* (2003)

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- Good childcare, healthy childcare (1989)
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- In the public interest: The benefits of high quality child care* (1997)

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* Indicates item available in French.

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